

L R P

electronics

Your

POWER

Source

**Your Product Guide To Power Buying
From Your *LRP* Distributor**

Main Office
150 West Grand Ave.
P.O. Box 1298
Lima, Ohio 45802

Phone: 800-472-0976 • 419-228-1220
FAX 419-223-5095

Fort Wayne Office
625 East Wayne St.
Fort Wayne, Indiana 46802

Phone: 800-246-0577 • 219-426-5344
FAX 219-424-2973

4 REASONS TO BUY BELDEN® CABLE FROM

LRP

electronics

Largest Selection.

Choose from the industry's largest selection of quality cables: multi-conductor, paired, coaxial, and flat cables, in plenum or non-plenum versions; fiber optic cables and accessories; power cords and molded

wiring, trust Belden to help you make the right connection. Our Product Engineering Group, located in the new 70,000 square foot Engineering Center, offers you vast dedicated resources to design specialty cable to meet your exact requirements.

Superior Performance.

This characteristic describes the main reputation Belden has earned in the industry. In fact,

precise and consistent manufacturing you will not find elsewhere. Our test methods are so unique, they're patented. But don't just take our word for it—prove it to yourself. We'll provide you with our test data so you're confident the Belden® cable you choose is compatible to your requirements. Zero defects is our performance standard and "doing it right the first time" our watchword. These and other guiding principles fuel our passion for total quality improvement.

Constant Innovation.

Nearly a century of cable design and manufacturing experience is chronicled in the Belden Master Catalog—representing product innovations which have become industry standards. And the pace of innovation never rests. In manufacturing processes, materials compounding, shield designs, test methods as well as cable design, Belden innovations keep ahead of all others. Just look at our catalog and compare it to any other.

Belden cable designs incorporate innovative shielding to minimize signal interference, and superior dielectrics for low signal loss. Choose from a variety of unique shield designs

including the patented Z-Fold,™ Beldfoil,™ Duofoil,™ and Duobond™ II. Belden's innovative Flammarrest™ jacketing for plenum cables is five times more flexible than fluorocopolymer jackets—and much less expensive.

If the Belden Catalog doesn't present the cable solution you need, let Belden help you design and manufacture it.

Local Availability and Service.

Your local authorized Belden Distributor stocks a comprehensive inventory of Belden cables for off-the-shelf delivery. Belden distributors extend our customer service and factory inventory to be sure the cables you want are readily available. Your local Belden Distributor may also provide specialized and value-added services you need. Call our Distributor identified below and request the latest copy of Belden's Master Catalog.

superior performance
has evolved to become synonymous with the Belden brand name. This is proven with documented reliability. Through rigid SPC and comprehensive testing of performance characteristics, Belden assures you of

cable assemblies; and lead wire. Thousands of standard cables are available for a variety of physical and electrical performance requirements. Whether your application is for computer networking, industrial control, alarm, sound/video, appliance or other internal

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Belden

**QUICK FIND
THUMB TABS****Voice Data &
Computer Accessories 1****Wire & Cable 2****Connectors 3****Batteries 4****Fuses 5****Lamps & Displays 6****Relays & Switches 7****Resistors & Capacitors 8****Semiconductors 9****Racks, Cabinets & Fans 10****Transformers &
Power Products 11****Chemicals & Tools 12****Test Instruments 13****Hardware &
CCTV Products 14****Index 15**

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GENERAL POLICIES

PRICING

The prices contained in this catalog are manufacturers' suggested resale prices and should be used for budgetary purposes only. Prices are subject to change without notice. Orders are filled at the price in effect at time of shipment. Please call for current prices and OEM quantity pricing.

DELIVERY

Freight will be FOB shipping point. Requests for special or premium methods of transportation will be at the buyer's expense.

MERCHANDISE RETURN

Merchandise may be returned for credit or exchange under the following conditions:

1. Return authorization is required.
2. Invoice number and date of sale must accompany returns.
3. Special order merchandise must be in resaleable condition and, where applicable, must be in original packaging.
4. Returned merchandise may be subject to a restock charge.
5. Freight charges on returned merchandise must be prepaid.

SHORTAGES OR DAMAGED MERCHANDISE

All claims must be made within seven days of receipt.

OPEN ACCOUNT

Open accounts are extended to rated firms, institutions and government agencies. Non-rated firms may apply for open account status by submitting appropriate trade and financial references.

TERMS

Open account terms are net 30 days unless otherwise noted on invoices.

QUOTATIONS

We invite you to submit requests for quotations on production quantities or items not shown in this catalog.

TAXES

Where applicable, federal, state and local taxes will be applied.

WARRANTY

All merchandise sold is subject to the warranty and guarantee policies extended by the manufacturer. We do not imply any warranties and/or assume any obligations except as expressly provided.

PRODUCT AVAILABILITY

This catalog does not contain every product and line available from us. Conversely, every product in the catalog may not be available from us.

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AUDIBLE DEVICES

Mallory
Trippe

BATTERIES

Alexander
Duracell
Eveready
Johnson (Gel-Cel)
Ray-O-Vac
TDI

CABINETS/ENCLOSURES

Akro-Mils
Bud
Platte

CAPACITORS

Cornell Dubilier
Nichicon/J.E.C.
Philips Components/
Waldom
Sprague
Mallory

CHEMICALS

Chemtronics
GC Electronics
Philips ECG
LPS
Tech Spray
WD-40

COMPUTER

ACCESSORIES

AIM
GC Electronics
3M
Trippe

CONNECTORS

AIM
AMP
Amphenol
Cannon
Cinch/TRW
Molex/Waldom
Pomona
Superior
Switchcraft
Vernitron

FANS/BLOWERS

AIM

FUSES/HOLDERS/ BREAKERS

Bussmann
Littelfuse
Potter & Brumfield

HARDWARE

Cinch/TRW
GC Electronics
Keystone
Kulka Smith
3M
Mueller

INTERCOM/P.A.

Atlas/Soundolier
Bogen
Fanon
Shure
Talk-A-Phone
University Sound

KNOBS

Augat/Alcoswitch
GC Electronics
Ohmite
Raytheon
Waldom

LAMPS/INDICATORS

Chicago Min.
Eiko
I.D.I.
Osram/Sylvania
Sunray

MICROPHONES

Bogen
Electro-Voice
Shure

PANEL METERS/ DISPLAYS

GC Electronics
Simpson
Triplett

POTENTIOMETERS

Beckman
Bourns
Clarostat
Mallory
Ohmite

POWER SUPPLIES/ CONDITIONERS

Sola
Trippe
Waber

PRINTED CIRCUIT MATERIALS

Datak
GC Electronics

RELAYS

Amperite
Ohmite
Philips ECG
Potter & Brumfield

RESISTORS/NETWORKS

Allen/Bradley
Clarostat
Dale
Mallory
Ohmite
Philips ECG

SEMICONDUCTORS/ ICs/SCRs

Harris/RCA/GE
Motorola
National Electronics
Philips ECG

SOLDER EQUIPMENT

Edsyn
Kester
Multicore
Ungar
Wahl
Weller

SOUND EQUIPMENT/ SPEAKERS

Atlas/Soundolier
Electro-Voice
Bogen
Lowell
Shure
University Sound

STATIC CONTROL

GC Electronics
3M
Philips ECG
Tech Spray

SWITCHES

Augat/Alcoswitch
GC Electronics
Grayhill/Waldom
Linemaster
McGill
Micro Switch
NKK
Switchcraft

TAPE (Audio, Video, Elec) 3M

TELEPHONE PRODUCTS

AIM
GC Electronics

TERMINAL BLOCKS/ STRIPS

Cinch/Waldom
Vernitron

TEST EQUIPMENT/LEADS

Amprobe
B & K
E-Z Hook
Fluke
Oldaker
Pomona/ITT
Simpson
Triplett
Wavetek
(formerly Beckman)

TIMER/CONDUCTORS

Industrial Timer
Philips ECG
Potter & Brumfield

TOOLS

GC Electronics
Klein
Master Appliance
Panavise
Weller
Xcelite

WIRE AND CABLE

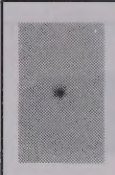
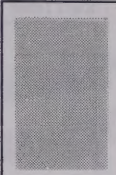
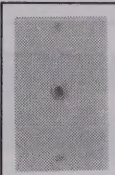
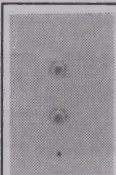
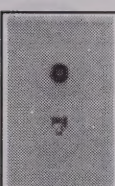
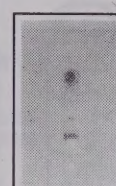
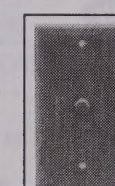
Alpha
Beldon
Carol

WIRE ACCESSORIES/ MARKERS/TUBING

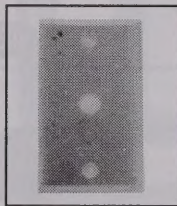
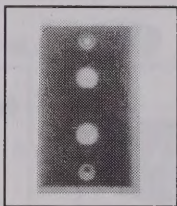
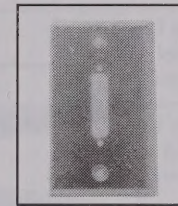
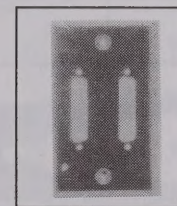
Alpha
Avery Dennison
Datak
3M



TV AND MODULAR WALL PLATES

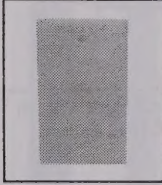
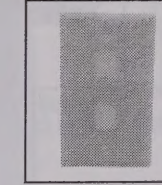
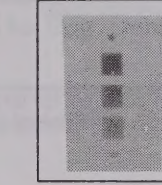
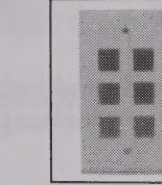
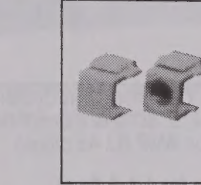
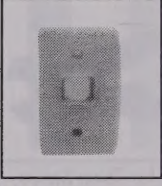
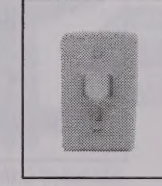
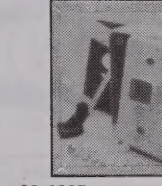
 PLASTIC WALL PLATE WITH F-81 FITTING • Complete with mounted F-81 fittings • Flush Mounted • Uses Standard F-59 Connectors • "0" db <table border="1"> <thead> <tr> <th>BULK NO.</th> <th>COLOR</th> <th>PACKAGED NO.</th> </tr> </thead> <tbody> <tr> <td>25-7770</td> <td>Ivory</td> <td>25-7770P</td> </tr> <tr> <td>25-7780</td> <td>Brown</td> <td>25-7780P</td> </tr> <tr> <td>25-7770W</td> <td>White</td> <td>25-7770WP</td> </tr> </tbody> </table>	BULK NO.	COLOR	PACKAGED NO.	25-7770	Ivory	25-7770P	25-7780	Brown	25-7780P	25-7770W	White	25-7770WP	 BLANK PLASTIC WALL PLATE • $\frac{3}{8}$" Center Hole • For mounting an F-81 Or for use as a feed thru for RG-59 Cable • Flush Mount <table border="1"> <thead> <tr> <th>BULK NO.</th> <th>COLOR</th> <th>PACKAGED NO.</th> </tr> </thead> <tbody> <tr> <td>25-7750</td> <td>Ivory</td> <td>25-7750P</td> </tr> <tr> <td>25-7760</td> <td>Brown</td> <td>25-7760P</td> </tr> <tr> <td>25-7750W</td> <td>White</td> <td>25-7750WP</td> </tr> </tbody> </table>	BULK NO.	COLOR	PACKAGED NO.	25-7750	Ivory	25-7750P	25-7760	Brown	25-7760P	25-7750W	White	25-7750WP	 PLASTIC WALL PLATE WITH F-81 FITTING • Decorative styling • Flush mount • Uses standard F-59 Connectors • "0" db <table border="1"> <thead> <tr> <th>BULK NO.</th> <th>COLOR</th> <th>PACKAGED NO.</th> </tr> </thead> <tbody> <tr> <td>25-7772</td> <td>Ivory</td> <td>25-7772P</td> </tr> <tr> <td>25-7772W</td> <td>White</td> <td>25-7772WP</td> </tr> </tbody> </table>	BULK NO.	COLOR	PACKAGED NO.	25-7772	Ivory	25-7772P	25-7772W	White	25-7772WP	 25-7890 25-7890P DUAL PLASTIC WALL PLATE WITH FITTINGS • Complete with mounted F-81 fittings • Flush Mounted • Uses Standard F-59 Connectors • "0" db • Ivory only Also available: Dual Plate without Fittings in Ivory 25-7790 25-7790P
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25-7772W	White	25-7772WP																																		
 32-1374 31-1374P DUAL PURPOSE WALL PLATE (4 Conductor) Telephone Jack and BNC Chassis Mount (Solder Type)	 32-1324 31-1324P DUAL PURPOSE WALL PLATE (4 Contacts) Modular Telephone Jack and F-81 Feed thru Antenna Receptacle	 25-7771 25-7771P WOODEN WALL PLATE WITH FITTING • Complete with mounted F-81 fitting • Flush Mounted • Uses Standard F-59 Connectors • "0" db • 100 per box in bulk																																		

STAINLESS STEEL WALL PLATES FOR ROUND CONNECTORS & D SUBS

 SINGLE HOLE <table border="1"> <thead> <tr> <th>BULK NO.</th> <th>HOLE</th> <th>PACKAGED NO.</th> </tr> </thead> <tbody> <tr> <td>27-8483</td> <td>$\frac{3}{8}$"</td> <td>27-8483P</td> </tr> <tr> <td>27-8478</td> <td>$\frac{1}{2}$"</td> <td>27-8478P</td> </tr> <tr> <td>27-8481</td> <td>$\frac{5}{8}$"</td> <td>27-8481P</td> </tr> <tr> <td>27-9088</td> <td>$\frac{3}{4}$"</td> <td>27-9088P</td> </tr> <tr> <td>27-8485</td> <td>Blank</td> <td>27-8485P</td> </tr> </tbody> </table>	BULK NO.	HOLE	PACKAGED NO.	27-8483	$\frac{3}{8}$ "	27-8483P	27-8478	$\frac{1}{2}$ "	27-8478P	27-8481	$\frac{5}{8}$ "	27-8481P	27-9088	$\frac{3}{4}$ "	27-9088P	27-8485	Blank	27-8485P	 DUAL HOLES <table border="1"> <thead> <tr> <th>BULK NO.</th> <th>HOLES</th> <th>PACKAGED NO.</th> </tr> </thead> <tbody> <tr> <td>27-8484</td> <td>$\frac{3}{8}$"</td> <td>27-8484P</td> </tr> <tr> <td>27-8479</td> <td>$\frac{1}{2}$"</td> <td>27-8479P</td> </tr> <tr> <td>27-8482</td> <td>$\frac{5}{8}$"</td> <td>27-8482P</td> </tr> <tr> <td>27-9089</td> <td>$\frac{3}{4}$"</td> <td>27-9089P</td> </tr> </tbody> </table>	BULK NO.	HOLES	PACKAGED NO.	27-8484	$\frac{3}{8}$ "	27-8484P	27-8479	$\frac{1}{2}$ "	27-8479P	27-8482	$\frac{5}{8}$ "	27-8482P	27-9089	$\frac{3}{4}$ "	27-9089P	 SINGLE PINS <table border="1"> <thead> <tr> <th>BULK NO.</th> <th>PINS</th> <th>PACKAGED NO.</th> </tr> </thead> <tbody> <tr> <td>40-9531</td> <td>25</td> <td>40-9531P</td> </tr> <tr> <td>40-9533</td> <td>15</td> <td>40-9533P</td> </tr> <tr> <td>40-9535</td> <td>9</td> <td>40-9535P</td> </tr> </tbody> </table>	BULK NO.	PINS	PACKAGED NO.	40-9531	25	40-9531P	40-9533	15	40-9533P	40-9535	9	40-9535P	 DUAL PINS <table border="1"> <thead> <tr> <th>BULK NO.</th> <th>PINS</th> <th>PACKAGED NO.</th> </tr> </thead> <tbody> <tr> <td>40-9532</td> <td>25</td> <td>40-9532P</td> </tr> <tr> <td>40-9534</td> <td>15</td> <td>40-9534P</td> </tr> <tr> <td>40-9536</td> <td>9</td> <td>40-9536P</td> </tr> </tbody> </table>	BULK NO.	PINS	PACKAGED NO.	40-9532	25	40-9532P	40-9534	15	40-9534P	40-9536	9	40-9536P
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VOICE AND DATA PRODUCTS

NEW

 30-9209 KEYSTONE WALLPLATE Single Outlet (Plastic Ivory)	 30-9210 KEYSTONE WALLPLATE Dual Outlet (Plastic Ivory)	 30-9211 KEYSTONE WALLPLATE 3 Outlets (Plastic Ivory)	 30-9212 KEYSTONE WALLPLATE 6 Outlets (Plastic Ivory)	 30-9213 Blank Plug 30-9214 Coax Plug
 30-9204 TYPE 1 WALLPLATE	 30-9205 TYPE 2 WALLPLATE	 30-9206 TYPE 1 and TYPE 2 SURFACE MOUNT BOX	 30-9207 TYPE 1 SURFACE MOUNT BOX AND WALLPLATE	 30-9208 TYPE 2 SURFACE MOUNT BOX AND WALLPLATE

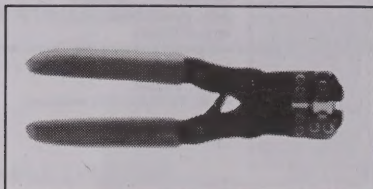
"P" Indicates Blister Packed for Peg-Board Display

BE SURE TO WATCH FOR OUR "POWER SOURCE" BROCHURES.



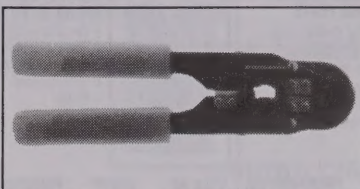
TELCO MODULAR CRIMP TOOLS

24-7746P



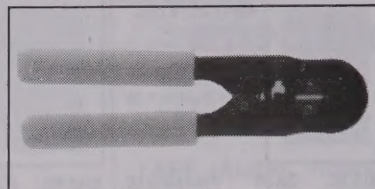
Metal Construction For Terminating 2, 4 & 6 Conductor Line Cords

24-7748P



Metal Construction For Terminating 8 & 8 Keyed

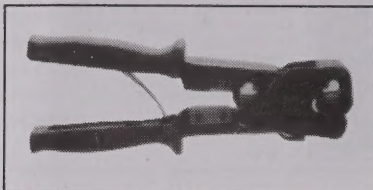
24-7749P



Metal Construction For Terminating 4 Conductor Mini Hand Set Plugs

24-4680P

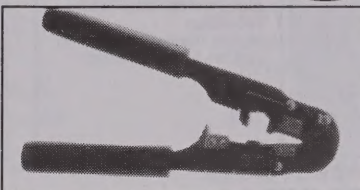
NEW



Combination Modular Crimp Tool Crimps 4, 6, 8, & 8 Keyed Modular Plugs (will not work on Amp RJ-45 plugs)

24-7750P

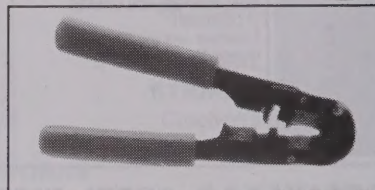
NEW



Modular Crimp Tool, Crimps 10 Conductor Modular Plugs

24-7751P

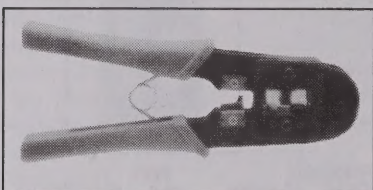
NEW



DEC Offset Crimp Tool Crimps 4 and 6 Conductor DEC (MMJ) Modular Plugs

24-7846P

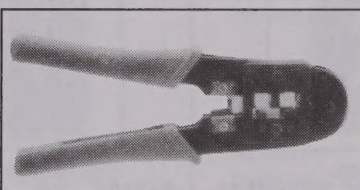
NEW



Combination Modular CRIMP Tool Crimps 4 and 6 Conductor Plugs

24-7869P

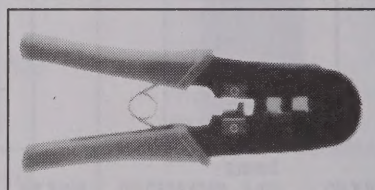
NEW



Combination Modular Crimp Tool Crimps 6 Conductor and DEC Plugs

24-7868P

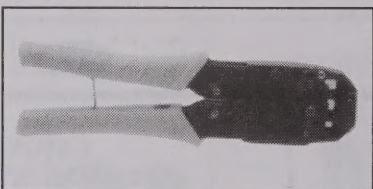
NEW



Combination Modular Crimp Tool Crimps 6 and 8 Conductor Plugs

24-7864P

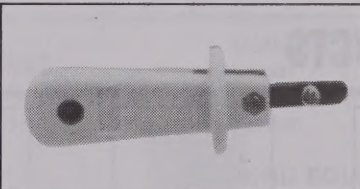
NEW



DELUXE COMBINATION CRIMP Tool Crimps 4, 6, 8, 10 & 6 Cond. DEC (works on AMP RJ-45 plugs)

24-411

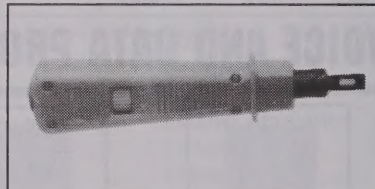
NEW



Standard Punch Down Tool for Terminating 66 Type Series Terminal Blocks

24-412

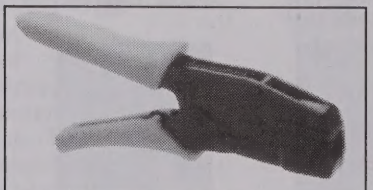
NEW



Automatic Professional Punch Down Tool & Wire Clipper for 66 type Blocks

24-334 for 4 & 6 Cond

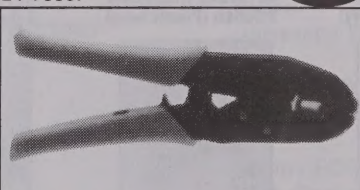
24-338 for 8 & 8 Keyed (will not work on AMP)



Deluxe Modular Crimp Tool Replaceable Dies
99-DC-34 - 4 & 6 Cond. Die
99-DC-38 - 8 & 8 Keyed

24-7850P

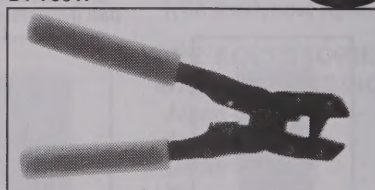
NEW



Deluxe Crimp Tool for Telco Splice, UY & BR Connectors

24-7851P

NEW



Standard Crimp Tool for Telco Splice, UY & BR Connectors

"P" Indicates Blister Packed for Peg-Board Display

UNSHIELDED TWISTED PAIR (UTP) HORIZONTAL CABLES

4 PR 24 AWG 100 OHM UTP PREMISES CABLE

DATA-SERIES	EIA 568 CSA 529 UL LEVEL ETL CATEGORY	FLAME RATING RISER/ FT-4/MPR	PLENUM/ FT-6/CMP	APPLICATIONS	MAXIMUM SYSTEM FREQ. (MHz)	MAXIMUM TEST FREQ. (MHz)
PWC I	I	✓	✓	POTS, 20 Kbps data	<<1	NR
PWC II	II	✓	✓	4 Mbps Token Ring	4	1
PWC III	III	✓	✓	10 Base T (Ethernet) 4 Mbps Token Ring ≤100 meters	10	16
PWC IV	IV	✓	✓	10 Base T (Ethernet) 16 Mbps Token Ring ≤100 meters	16	20
PWC V	V	✓	✓	Systems up to 100 Mbps or >100 meters	25+	100

Lan Cable Certification Program

Dataseries PWC III - V cables in both FT-4 and FT-6 constructions have been third party tested to either UL or ETL certification programs. As part of this certification, the manufacturing facility maintains an ISO (International Organization for Standardization) 9002 Quality Level.

These test programs, together with the UL and ETL follow up service, ensure the end user of complete and continued conformance to industry standards.



LISTED



CERTIFIED



VERIFIED

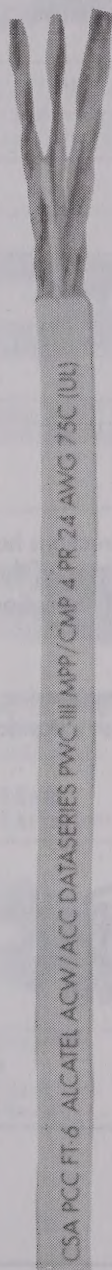
**THIS MANUFACTURER HAS ACHIEVED
ISO 9000 QUALITY SYSTEMS STANDARDS.**

DATASERIES PWC III

Applications

- Voice and data
- 4 Mbps Token Ring – 100m
- 10 Mbps Ethernet
(10 Base T) – 100m

Note: 25 pair cables and greater are recommended for run lengths up to 30m.



Level III UTP

Product Range

Specifications	AWG	Pair Count
UL MPR/CMR CSA PCC FT-4	22-24	2-25
UL MPP/CMP CSA PCC FT-6	24	2-25
	22	2-20

Cable Data (24 AWG)

Non Plenum

Pair Count	Catalogue No.	Jacket Thickness		Cable Diameter		Cable Weight	
		in	mm	in	mm	lb/Kft	Kg/Km
2	3040-24-02	.015	.38	0.155	3.94	11	16
3	3040-24-03	.015	.38	0.165	4.19	14	21
4	3040-24-04	.015	.38	0.180	4.57	18	27
6	3040-24-06	.015	.38	0.215	5.46	26	39
25	3040-24-25	.022	.56	0.390	9.91	96	143

Plenum

Pair Count	Catalogue No.	Jacket Thickness		Cable Diameter		Cable Weight	
		in	mm	in	mm	lb/Kft	Kg/Km
2	3052-24-02	.009	.23	0.140	3.56	10	15
3	3052-24-03	.009	.23	0.150	3.81	13	19
4	3052-24-04	.009	.23	0.165	4.19	17	25
6	3052-24-06	.009	.23	0.205	5.21	25	37
25	3052-24-25	.011	.28	0.360	9.14	95	141

Transmission Characteristics

Mutual Capacitance, max. – pF/m (pF/ft) : 66 (20)
 DC Resistance, max. – Ω /305 m (Kft) : 28.6
 DC Resistance Unbalance, maximum – % : 5
 Pair-to-Ground Cap. Unbalance, max. – pF/305 m (Kft) : 1000

Frequency MHz	Characteristic Impedance Ω	Maximum Attenuation dB/305 m(Kft)	Worst-Pair NEXT Minimum dB
0.064	125 $\pm$ 15%	2.8	—
0.128	115 $\pm$ 15%	—	—
0.150	—	—	54
0.256	110 $\pm$ 15%	4.0	—
0.512	—	5.6	—
0.772	102 $\pm$ 15%	6.8	43
1.0	100 $\pm$ 15%	7.8	41
4.0	100 $\pm$ 15%	17	32
8.0	100 $\pm$ 15%	26	28
10.0	100 $\pm$ 15%	30	26
16.0	100 $\pm$ 15%	40	23

CALL US FOR INFORMATION ON ANY
UNLISTED PARTS OR EQUIPMENT.

DATASERIES PWC V

Applications

- Systems up to 100 Mbps @ 100m
Maximum run length.
- Systems below 100 Mbps with
extended (>100m) run lengths.

Level V UTP

Product Range

Specifications	AWG	Pair Count
UL MPR/CMR CSA PCC/FT-4	22-24	2-4
UL CMP CSA PCC/FT-6	22-24	2-4

Cable Data (24 AWG)

Non Plenum

Pair Count	Catalogue No.	Jacket Thickness		Cable Diameter		Cable Weight	
		in	mm	in	mm	lb/Kft	Kg/Km
2	5041-24-02	.015	.38	0.160	4.06	12	18
3	5041-24-03	.015	.38	0.165	4.19	15	22
4	5041-24-04	.015	.38	0.185	4.70	19	28

Plenum

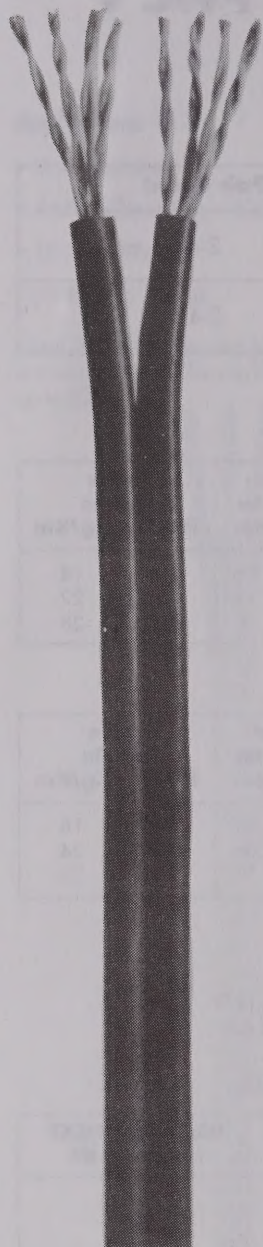
Pair Count	Catalogue No.	Jacket Thickness		Cable Diameter		Cable Weight	
		in	mm	in	mm	lb/Kft	Kg/Km
2	5080-24-02	.015	.38	0.150	3.81	12	18
3	5080-24-03	.015	.38	0.160	4.06	16	24
4	5080-24-04	.015	.38	0.180	4.57	20	30

Transmission Characteristics

Mutual Capacitance, max. – pF/m (pF/ft) : 56 (17)
 DC Resistance, max. – Ω /305 m (Kft) : 28.6
 DC Resistance Unbalance, maximum – % : 5
 Pair-to-Ground Cap. Unbalance, max. – pF/305 m (Kft) : 1000

Frequency MHz	Characteristic Impedance Ω	Max. Attenuation dB/305 m (Kft)	Worst-Pair NEXT Minimum dB
0.772	102 $\pm$ 15%	5.5	64
1.0	100 $\pm$ 15%	6.3	62
4.0	100 $\pm$ 15%	13	53
8.0	100 $\pm$ 15%	18	48
10.0	100 $\pm$ 15%	20	47
16.0	100 $\pm$ 15%	25	44
20.0	100 $\pm$ 15%	28	42
25.0	100 $\pm$ 15%	32	41
31.25	100 $\pm$ 15%	36	40
62.5	100 $\pm$ 15%	52	35
100.0	100 $\pm$ 15%	67	32

NEED VALUE-ADDED SERVICES?
CALL US FOR INFORMATION.



Dataseries® PWC DUALCORE™

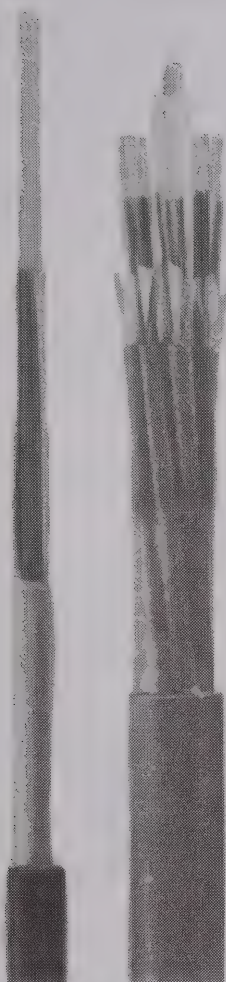
As part of the Dataseries line of unshielded twisted pair (UTP) Premises Wiring Cables, Alcatel Canada Wire is pleased to introduce Dualcore™, a siamese design that facilitates cable installation. The cable consists of two - 4 pair jacketed cores, connected by a thin PVC web that can be easily separated during termination. Where local area networks require two - 4 pair cables, considerable labor savings can be achieved by installing cables that utilize the dual parallel core configuration. ACW Dualcore™ cables are available in the five EIA/TIA performance levels with applications ranging from analogue voice to 100 Mbps data. The cables are also available in

hybrid designs for applications which require two different performance levels. All cables have been verified by ETL Testing Laboratories to applicable EIA/TIA level requirements. Several standard products are stocked by Alcatel Canada Wire and include Level 3 and 5 Riser/FT-4, and plenum/FT-6 constructions. Cables are stocked in 1000' (305m) lengths on convenient plywood spools. When designing or installing your next LAN system, check the advantages of specifying Dualcore™ Premises Wiring Cable. Choose Alcatel Canada Wire for all your data cable needs

DUALCORE™ STANDARD PRODUCTS

AWG	PAIR COUNT	EIA 568 LEVEL	UL	CSA	CATALOGUE NO.	CABLE DIA (in.)	CABLE lbs./WT.
24	2 X 4 PR	3	MPR/CMR	PCC FT-4	D 3310	.180 X .390	36
24	2 X 4 PR	5	MPR/CMR	PCC FT-4	D 5510	.180 X .390	36
24	2 X 4 PR	5	CMP	PCC FT-6	D 5550	.175 X .380	38
24	1 X 4 PR	3	MPR/CMR	PCC FT-4	D 3510	.180 X .390	36
24	1 X 4 PR	5					

Dataseries Optical Riser Cables



Alcatel Canada Wire produces a range of Riser cables designed for indoor installation.

The Dataseries Optical Riser cable family of products up to 16 fibers, consists of tight buffered fibers coupled directly to a non-metallic central strength member. A layer of aramid yarns is then applied over the fibers for cushioning and strength, followed by an extruded fire resistant jacket.

Cables containing more than 16 fibers utilize the unitized core design. A unit consists of 6 fibers stranded around a unit strength member. The required number of units are stranded around

the central strength member to form a round core. The core is protected with a core wrap and an overall fire resistant jacket.

Dataseries Riser cables have been designed and tested to comply with the 1990 National Electrical Code and the 1990 Canadian Electrical Code. These cables have UL listing as type OFNR and are certified to CSA Standard C22.2 No. 232 FT-4.

Temperature Limits

Shipping and storage: -40°C to +65°C

Installation: -20°C to +65°C

Operation: -20°C to +65°C

No. of Fibers	Fire Rating	Cable Dia. (mm)	Cable Weight (Kg/Km)	Min. Bend Radius No Load/Load (mm)	Max. Installation Tension (N)
8	OFNR/FT-4	6.4	40	64/96	1335
12	OFNR/FT-4	8.0	60	80/120	1335
16	OFNR/FT-4	9.0	85	90/135	1335
18	OFNR/FT-4	11.5	120	115/172	1335
24	OFNR/FT-4	11.5	120	115/172	1335
30	OFNR/FT-4	13.0	145	130/195	1335
36	OFNR/FT-4	14.2	170	142/213	1800
42	OFNR/FT-4	15.5	200	155/232	1800
48	OFNR/FT-4	16.8	245	168/252	1800
60	OFNR/FT-4	19.5	325	195/292	1800
72	OFNR/FT-4	21.0	340	210/315	2670
84	OFNR/FT-4	21.0	340	210/315	2670
96	OFNR/FT-4	21.0	340	210/315	2670

**THIS MANUFACTURER HAS ACHIEVED
ISO 9000 QUALITY SYSTEMS STANDARDS.**

Corflex is factory installed cable-in-conduit which consists of any of our indoor fiber optic cables enclosed in a corrugated aluminum sheath to provide a very high degree of longitudinal strength, crush resistance and exceptional installation characteristics.

Self-Supporting

The aluminum sheath makes Corflex cable self-supporting. A minimum

number of clamps are required for a neat installation.

Bendability

Corflex can be trained into place with little effort because it has superior bending characteristics. This feature makes it especially suitable in confined areas and where many changes in direction are required.

Reliability

For more than 30 years our Corflex cables have provided the preferred sheathing solution for users of all types of power cables. We have now combined this unique metallic armour with our range of indoor fiber optical cables. The well proven qualities of Corflex will give the reliability

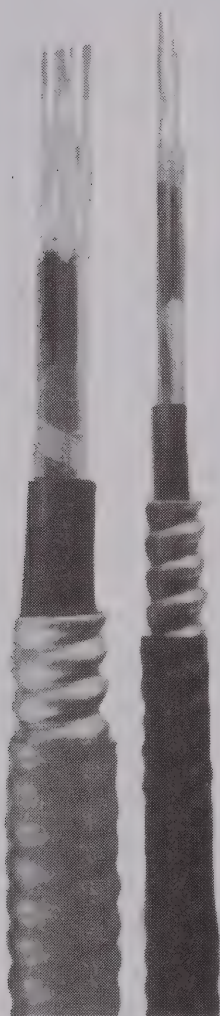
demanded for fiber optic cabling systems now and in the future.

Dataseries Optical Corflex cables have been designed and tested to comply with the 1990 National Electrical Code and the 1990 Canadian Electrical Code. The cable cores have UL listing as type OFNR and are certified to CSA Standard C22.2 No. 232 FT-4.

Dollar Savings

Corflex is quickly and easily installed with substantial savings in time and labour. A separate conduit is not required.

(Interlocked aluminum or steel armour is also available)



No. of Fibers	Fire Rating	Cable Dia. (mm)	Cable Weight (Kg/Km)	Min. Bend Radius No Load/Load (mm)	Max. Installation Tension (N)
Riser Cable Core Unjacketed					
6	OFNR/FT-4	11.0	108	110/165	1335
12	OFNR/FT-4	12.5	138	125/188	1335
24	OFNR/FT-4	16.0	220	160/240	1335
Riser Cable Core Jacketed					
6	OFNR/FT-4	13.5	175	135/203	1335
12	OFNR/FT-4	15.0	214	150/225	1335
24	OFNR/FT-4	18.5	315	185/278	1335
Cord Cable Core Unjacketed					
6	OFNR/FT-4	14.5	200	145/217	1800
12	OFNR/FT-4	19.5	250	195/292	3000
24	OFNR/FT-4	23.5	400	235/352	3000
Cord Cable Core Jacketed					
6	OFNR/FT-4	17.0	285	170/255	1800
12	OFNR/FT-4	22.0	365	220/330	3000
24	OFNR/FT-4	26.0	535	260/390	3000

**OUR GOAL IS PROVIDING QUALITY PRODUCTS AND SERVICES
TO MEET YOUR NEEDS.**

Dataserie[®] 100

150V	MULTICONDUCTOR	PVC INS
105C*	UNSHIELDED	PVC JKT
SPECIFICATIONS: CSA AWM T1, AWM 2576 UL SUBJ. 444 MPR/CMR *UL 80 C AWM		FIRE TESTS: FT-1, FT-4, VW-1 UL 1666 RISER TEST



DESCRIPTION:
#22 (7W) tinned copper, PVC insulation, conductors cabled, chrome grey PVC jacket.

22 GAUGE

NO. OF COND.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	SEE (150-01-22)	.010	.25	.030	.76	.165	4.19
3	100-03-22	.010	.25	.030	.76	.173	4.39
4	100-04-22	.010	.25	.030	.76	.186	4.72
5	100-05-22	.010	.25	.030	.76	.201	5.10
6	100-06-22	.010	.25	.030	.76	.216	5.49
7	100-07-22	.010	.25	.030	.76	.216	5.49
8	100-08-22	.010	.25	.030	.76	.232	5.89
9	100-09-22	.010	.25	.030	.76	.251	6.37
10	100-10-22	.010	.25	.030	.76	.251	6.37
12	100-12-22	.010	.25	.030	.76	.278	7.05
15	100-15-22	.010	.25	.040	1.02	.315	8.00
19	100-19-22	.010	.25	.040	1.02	.345	8.76
20	100-20-22	.010	.25	.040	1.02	.355	9.02
25	100-25-22	.010	.25	.040	1.02	.390	9.91
30	100-30-22	.010	.25	.040	1.02	.405	10.29
40	100-40-22	.010	.25	.040	1.02	.465	11.81
50	100-50-22	.010	.25	.040	1.02	.510	12.95

COLOUR CODE:

2/C BLACK, RED
3/C BLACK, RED, GREEN
4-12/C CHART 1
15-50/C CHART 2

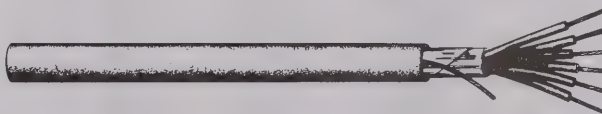
PRINT:

(EXAMPLE FOR
6/C 22AWG)

CSA AWM T1 105C PVC 150V FT-4 ALCATEL CANADA WIRE DATASERIES 100-06-22
MPR 22 AWG 105C (UL) OR AWM 80C 150V VW-1

Dataserie[®] 101

150V	MULTICONDUCTOR	PVC INS
105C*	O/A SHIELDED	PVC JKT
SPECIFICATIONS: CSA AWM T1, AWM 2576 UL SUBJ. 444 MPR/CMR *UL 80 C AWM		FIRE TESTS: FT-1, FT-4, VW-1 UL 1666 RISER TEST



DESCRIPTION:

#22 (7W) tinned copper, PVC insulation, conductors cabled, O/A aluminum/Mylar foil shield,
#22 (7W) tinned copper drain, chrome grey PVC jacket

22 GAUGE

NO. OF COND.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	101-02-22	.010	.25	.030	.76	.169	4.29
3	101-03-22	.010	.25	.030	.76	.177	4.49
4	101-04-22	.010	.25	.030	.76	.190	4.82
5	101-05-22	.010	.25	.030	.76	.205	5.20
6	101-06-22	.010	.25	.030	.76	.220	5.59
7	101-07-22	.010	.25	.030	.76	.220	5.59
8	101-08-22	.010	.25	.030	.76	.236	5.99
9	101-09-22	.010	.25	.030	.76	.252	6.39
10	101-10-22	.010	.25	.030	.76	.252	6.39
12	101-12-22	.010	.25	.030	.76	.282	7.15
15	101-15-22	.010	.25	.040	1.02	.325	8.26
19	101-19-22	.010	.25	.040	1.02	.350	8.89
20	101-20-22	.010	.25	.040	1.02	.360	9.14
25	101-25-22	.010	.25	.040	1.02	.395	10.03
30	101-30-22	.010	.25	.040	1.02	.410	10.41
40	101-40-22	.010	.25	.040	1.02	.470	11.94
50	101-50-22	.010	.25	.040	1.02	.515	13.08

COLOUR CODE:

2/C BLACK, RED
3/C BLACK, RED, GREEN
4-12/C CHART 1
15-50/C CHART 2

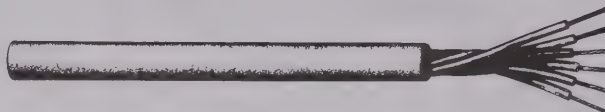
PRINT:

(EXAMPLE FOR
6/C 22 AWG)

CSA AWM T1 105C PVC 150V FT-4 ALCATEL CANADA WIRE DATASERIES 101-06-22
MPR 22 AWG 105C SHIELDED (UL) OR AWM 80C 150V VW-1

Dataserie[®] 110

300V	MULTICONDUCTOR	PVC INS
105C	UNSHIELDED	PVC JKT
SPECIFICATIONS:		FIRE TESTS:
CSA AWM T1,		FT-1, FT-4,
AWM 2517		VW-1
UL SUBJ. 444 MPR/CMR		UL 1666 RISER TEST



DESCRIPTION:
#22 (7W) tinned copper, PVC insulation, conductors
cabled, chrome grey PVC jacket.

22 GAUGE

NO. OF COND.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	SEE (160-01-22)	.015	.38	.030	.76	.185	4.70
3	110-03-22	.015	.38	.030	.76	.194	4.93
4	110-04-22	.015	.38	.030	.76	.210	5.33
5	110-05-22	.015	.38	.030	.76	.228	5.78
6	110-06-22	.015	.38	.030	.76	.246	6.25
7	110-07-22	.015	.38	.030	.76	.246	6.25
8	110-08-22	.015	.38	.030	.76	.265	6.73
9	110-09-22	.015	.38	.030	.76	.287	7.29
10	110-10-22	.015	.38	.030	.76	.287	7.29
12	110-12-22	.015	.38	.030	.76	.320	8.13
15	110-15-22	.015	.38	.040	1.02	.360	9.14
19	110-19-22	.015	.38	.040	1.02	.395	10.03
20	110-20-22	.015	.38	.040	1.02	.405	10.29
25	110-25-22	.015	.38	.040	1.02	.445	11.30
30	110-30-22	.015	.38	.040	1.02	.480	12.19
40	110-40-22	.015	.38	.040	1.02	.540	13.72
50	110-50-22	.015	.38	.040	1.02	.615	15.62

DESCRIPTION:
#20 (10W) tinned copper, PVC insulation, conductors
cabled, chrome grey PVC jacket.

20 GAUGE

NO. OF COND.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	SEE (160-01-20)	.015	.38	.030	.76	.200	5.08
3	110-03-20	.015	.38	.030	.76	.209	5.31
4	110-04-20	.015	.38	.030	.76	.227	5.76
5	110-05-20	.015	.38	.030	.76	.247	6.26
6	110-06-20	.015	.38	.030	.76	.267	6.78
7	110-07-20	.015	.38	.030	.76	.267	6.78
8	110-08-20	.015	.38	.030	.76	.288	7.32
9	110-09-20	.015	.38	.030	.76	.310	7.87
10	110-10-20	.015	.38	.030	.76	.310	7.87
12	110-12-20	.015	.38	.030	.76	.350	8.89
15	110-15-20	.015	.38	.040	1.02	.395	10.03
19	110-19-20	.015	.38	.040	1.02	.430	10.92
20	110-20-20	.015	.38	.040	1.02	.445	11.30
25	110-25-20	.015	.38	.040	1.02	.485	12.32

DESCRIPTION:
#18 (16W) tinned copper, PVC insulation, conductors
cabled, chrome grey PVC jacket.

18 GAUGE

NO. OF COND.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	SEE (160-01-18)	.015	.38	.030	.76	.219	5.56
3	110-03-18	.015	.38	.030	.76	.231	5.86
4	110-04-18	.015	.38	.030	.76	.251	6.37
5	110-05-18	.015	.38	.035	.89	.284	7.22
6	110-06-18	.015	.38	.035	.89	.310	7.87
7	110-07-18	.015	.38	.035	.89	.310	7.87
8	110-08-18	.015	.38	.035	.89	.330	8.38
9	110-09-18	.015	.38	.040	1.02	.370	9.40
10	110-10-18	.015	.38	.040	1.02	.370	9.40
12	110-12-18	.015	.38	.040	1.02	.410	10.41
15	110-15-18	.015	.38	.045	1.14	.450	11.43
19	110-19-18	.015	.38	.045	1.14	.490	12.45
20	110-20-18	.015	.38	.045	1.14	.505	12.83
25	110-25-18	.015	.38	.060	1.52	.585	14.86

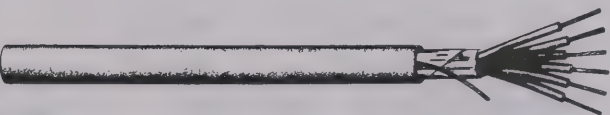
COLOUR CODE:
2/C BLACK, RED
3-12/C CHART 1
15-50/C CHART 2

PRINT:
(EXAMPLE FOR
6 C 20 AWG)

CSA AWM T1 105C PVC 300V FT-1 ALCATEL CANADA WIRE DATASERIE 110-06-20
MPR 20 AWG 105C (UL) OR AWM 105C 300V VW-1

Dataseries® 111

300V	MULTICONDUCTOR	PVC INS
105C	O/A SHIELD	PVC JKT
SPECIFICATIONS:		FIRE TESTS:
CSA AWM T1,		FT-1, FT-4,
UL AWM 2517		VW-1
UL SUBJ. 444 MPR/CMR		UL 1666 RISER TEST



DESCRIPTION:

#22 (7W) tinned copper, PVC insulation, conductors cabled, O/A aluminum/Mylar foil shield.
#22 (7W) tinned copper drain, chrome grey PVC jacket.

22 GAUGE

NO. OF COND.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	111-02-22	.015	.38	.030	.76	.189	4.80
3	111-03-22	.015	.38	.030	.76	.198	5.03
4	111-04-22	.015	.38	.030	.76	.214	5.44
5	111-05-22	.015	.38	.030	.76	.232	5.89
6	111-06-22	.015	.38	.030	.76	.250	6.35
7	111-07-22	.015	.38	.030	.76	.250	6.35
8	111-08-22	.015	.38	.030	.76	.269	6.83
9	111-09-22	.015	.38	.030	.76	.288	7.31
10	111-10-22	.015	.38	.030	.76	.288	7.31
12	111-12-22	.015	.38	.030	.76	.325	8.26
15	111-15-22	.015	.38	.040	1.02	.370	9.40
19	111-19-22	.015	.38	.040	1.02	.400	10.16
20	111-20-22	.015	.38	.040	1.02	.410	10.41
25	111-25-22	.015	.38	.040	1.02	.450	11.43
30	111-30-22	.015	.38	.040	1.02	.485	12.32
40	111-40-22	.015	.38	.040	1.02	.545	13.84
50	111-50-22	.015	.38	.050	1.27	.620	15.75

DESCRIPTION:

#20 (10W) tinned copper, PVC insulation, conductors cabled, O/A aluminum/Mylar foil shield.
#20 (10W) tinned copper drain, chrome grey PVC jacket.

20 GAUGE

NO. OF COND.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	111-02-20	.015	.38	.030	.76	.203	5.16
3	111-03-20	.015	.38	.030	.76	.213	5.42
4	111-04-20	.015	.38	.030	.76	.231	5.86
5	111-05-20	.015	.38	.030	.76	.251	6.37
6	111-06-20	.015	.38	.030	.76	.271	6.88
7	111-07-20	.015	.38	.030	.76	.271	6.88
8	111-08-20	.015	.38	.030	.76	.292	7.42
9	111-09-20	.015	.38	.030	.76	.315	8.00
10	111-10-20	.015	.38	.030	.76	.315	8.00
12	111-12-20	.015	.38	.030	.76	.355	9.02
15	111-15-20	.015	.38	.040	1.02	.400	10.17
19	111-19-20	.015	.38	.040	1.02	.435	11.05
20	111-20-20	.015	.38	.040	1.02	.450	11.43
25	111-25-20	.015	.38	.040	1.02	.490	12.45

DESCRIPTION:

#18 (16W) tinned copper, PVC insulation, conductors cabled, O/A aluminum/Mylar foil shield.
#18 (16W) tinned copper drain, chrome grey PVC jacket.

18 GAUGE

NO. OF COND.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	111-02-18	.015	.38	.030	.76	.223	5.66
3	111-03-18	.015	.38	.030	.76	.235	5.96
4	111-04-18	.015	.38	.030	.76	.255	6.48
5	111-05-18	.015	.38	.035	.89	.288	7.32
6	111-06-18	.015	.38	.035	.89	.315	8.00
7	111-07-18	.015	.38	.035	.89	.315	8.00
8	111-08-18	.015	.38	.035	.89	.335	8.51
9	111-09-18	.015	.38	.040	1.02	.370	9.40
10	111-10-18	.015	.38	.040	1.02	.370	9.40
12	111-12-18	.015	.38	.040	1.02	.415	10.54
15	111-15-18	.015	.38	.045	1.14	.455	11.56
19	111-19-18	.015	.38	.045	1.14	.495	12.57
20	111-20-18	.015	.38	.045	1.14	.510	12.95
25	111-25-18	.015	.38	.060	1.52	.590	14.99

COLOR CODE:

2/C BLACK, RED
3-12/C CHART 1
15-50/C CHART 2

PRINT:

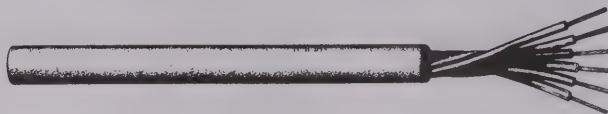
(EXAMPLE FOR
6/C 20 AWG)

CSA AWM T1 105C PVC 300V FT-4 ALCATEL CANADA WIRE DATASERIES 111-06-20

MPR 20 AWG 105C SHIELDED (UL) OR UL AWM 105C 300V VW-1

Dataserie[®] 130

600V	MULTICONDUCTOR	PVC INS
105C	UNSHIELDED	PVC JKT
SPECIFICATIONS: CSA AWM T1, UL AWM 2586 UL SUBJ. 444 MPR/CMR (16AWG ONLY)		FIRE TESTS: FT-1, FT-4, VW-1 UL 1666 RISER TEST



DESCRIPTION:
 #16 (26W) tinned copper, PVC insulation, conductors
 cabled, chrome grey PVC jacket.

NO. OF COND.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	130-02-16	.030	.76	.045	1.14	.340	8.64
3	130-03-16	.030	.76	.045	1.14	.355	9.02
4	130-04-16	.030	.76	.045	1.14	.390	9.91
5	130-05-16	.030	.76	.045	1.14	.425	10.80
6	130-06-16	.030	.76	.045	1.14	.460	11.68
7	130-07-16	.030	.76	.045	1.14	.460	11.68
8	130-08-16	.030	.76	.045	1.14	.500	12.70
9	130-09-16	.030	.76	.045	1.14	.540	13.72
10	130-10-16	.030	.76	.045	1.14	.540	13.72
12	130-12-16	.030	.76	.060	1.52	.635	16.14
15	130-15-16	.030	.76	.060	1.52	.675	17.15
19	130-19-16	.030	.76	.060	1.52	.740	18.80
20	130-20-16	.030	.76	.060	1.52	.760	19.30
25	130-25-16	.030	.76	.080	2.03	.880	22.35

CSA AWM T1 105C PVC 600V FT-4 ALCATEL CANADA WIRE DATASERIES 130-06-16
 (EXAMPLE FOR MPR 16 AWG 105C (UL) OR **UL** AWM 105C 600V VW-1
 6/C 16 AWG)

DESCRIPTION:
 #14 (41W) tinned copper, PVC insulation, conductors
 cabled, chrome grey PVC jacket.

14 GAUGE

NO. OF COND.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	130-02-14	.030	.76	.045	1.14	.370	9.40
3	130-03-14	.030	.76	.045	1.14	.390	9.91
4	130-04-14	.030	.76	.045	1.14	.425	10.80
5	130-05-14	.030	.76	.060	1.52	.495	12.57
6	130-06-14	.030	.76	.060	1.52	.535	13.59
7	130-07-14	.030	.76	.060	1.52	.535	13.59
8	130-08-14	.030	.76	.060	1.52	.575	14.61
9	130-09-14	.030	.76	.060	1.52	.620	15.75
10	130-10-14	.030	.76	.060	1.52	.620	15.75
12	130-12-14	.030	.76	.060	1.52	.690	17.53
15	130-15-14	.030	.76	.060	1.52	.740	18.80
19	130-19-14	.030	.76	.060	1.52	.820	20.83
20	130-20-14	.030	.76	.080	2.03	.880	22.35
25	130-25-14	.030	.76	.080	2.03	.965	24.51

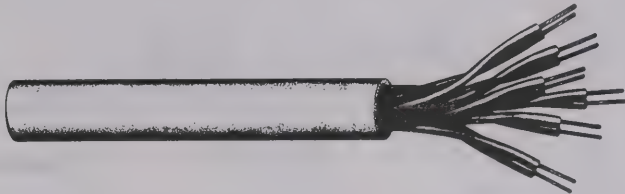
COLOUR CODE:
 2/C BLACK, RED
 3-25/C CHART 2

PRINT:
 (EXAMPLE FOR CSA AWM T1 105C PVC 600V FT-4 ALCATEL CANADA WIRE DATASERIES 130-03-14
 3/C 14 AWG) **UL** AWM 105C 600V VW-1

**DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW
 ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL
 US FOR THE LATEST INFORMATION.**

Dataseries® 160

300 V	MULTIPAIR	PVC INS
105 C	UNSHIELDED	PVC JKT
SPECIFICATIONS:		FIRE TESTS:
CSA AWM T1, UL AWM 2517 UL SUBJ. 444 MPR/CMR		FT-1, FT-4, VW-1 UL 1666 RISER TEST



DESCRIPTION:
#22 (7W) tinned copper, PVC insulation, pairs
cabled, chrome grey PVC jacket.

22 GAUGE

NO. OF PAIRS	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
1	160-01-22	.015	.38	.030	.76	.185	4.70
2	160-02-22	.015	.38	.030	.76	.270	6.85
3	160-03-22	.015	.38	.030	.76	.285	7.24
4	160-04-22	.015	.38	.030	.76	.310	7.87
5	160-05-22	.015	.38	.030	.76	.340	8.64
6	160-06-22	.015	.38	.030	.76	.370	9.40
8	160-08-22	.015	.38	.030	.76	.405	10.29
9	160-09-22	.015	.38	.030	.76	.430	10.92
12	160-12-22	.015	.38	.030	.76	.485	12.32
15	160-15-22	.015	.38	.035	.89	.545	13.84
19	160-19-22	.015	.38	.050	1.27	.630	16.00

DESCRIPTION:
#20 (10W) tinned copper, PVC insulation, pairs
cabled, chrome grey PVC jacket.

20 GAUGE

NO. OF PAIRS	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
1	160-01-20	.015	.38	.030	.76	.200	5.08
2	160-02-20	.015	.38	.030	.76	.295	7.49
3	160-03-20	.015	.38	.030	.76	.310	7.87
4	160-04-20	.015	.38	.030	.76	.340	8.64
5	160-05-20	.015	.38	.030	.76	.375	9.53
6	160-06-20	.015	.38	.030	.76	.405	10.29
8	160-08-20	.015	.38	.035	.89	.455	11.56
9	160-09-20	.015	.38	.035	.89	.480	12.19
12	160-12-20	.015	.38	.035	.89	.545	13.84
15	160-15-20	.015	.38	.050	1.27	.630	16.00
19	160-19-20	.015	.38	.050	1.27	.695	17.65

DESCRIPTION:
#18 (16W) tinned copper, PVC insulation, pairs
cabled, chrome grey PVC jacket.

18 GAUGE

NO. OF PAIRS	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
1	160-01-18	.015	.38	.030	.76	.219	5.56
2	160-02-18	.015	.38	.035	.89	.335	8.51
3	160-03-18	.015	.38	.035	.89	.355	9.02
4	160-04-18	.015	.38	.035	.89	.390	9.91
5	160-05-18	.015	.38	.035	.89	.430	10.92
6	160-06-18	.015	.38	.035	.89	.465	11.81
8	160-08-18	.015	.38	.040	1.02	.520	13.21
9	160-09-18	.015	.38	.040	1.02	.550	13.97
12	160-12-18	.015	.38	.050	1.27	.640	16.26
15	160-15-18	.015	.38	.050	1.27	.705	17.91
19	160-19-18	.015	.38	.050	1.27	.780	19.81
25	160-25-18	.015	.38	.080	2.03	.940	23.88

COLOUR CODE:
CHART 3

PRINT:
(EXAMPLE FOR
6 PR. 20 AWG)

CSA AWM T1 105C PVC 300V FT-4 ALCATEL CANADA WIRE DATASERIES 160-06-20 MPR 20
AWG 105C (UL) OR UL AWM 105C 300V VW-1

**THIS MANUFACTURER HAS ACHIEVED
ISO 9000 QUALITY SYSTEMS STANDARDS.**

Dataserie[®] 161

300V	MULTIPAIR	PVC INS
105C	O/A SHIELD	PVC JKT
SPECIFICATIONS: CSA AWM T1, UL AWM 2517 UL SUBJ. 444 MPR/CMR		FIRE TESTS: FT-1, FT-4, VW-1 UL 1666 RISER TEST



DESCRIPTION:

#22 (7W) tinned copper, PVC insulation, pairs cabled, O/A aluminum/Mylar foil shield,
 #22 (7W) tinned copper drain, chrome grey PVC jacket.

22 GAUGE

NO. OF PAIRS	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER	
		in.	mm.	in.	mm.	in.	mm.
2	161-02-22	.015	.38	.030	.76	.274	6.95
3	161-03-22	.015	.38	.030	.76	.289	7.34
4	161-04-22	.015	.38	.030	.76	.315	8.00
6	161-06-22	.015	.38	.030	.76	.375	9.53
9	161-09-22	.015	.38	.030	.76	.430	10.92
12	161-12-22	.015	.38	.030	.76	.490	12.45
15	161-15-22	.015	.38	.030	.76	.550	13.97
19	161-19-22	.015	.38	.050	1.27	.635	16.13
27	161-27-22	.015	.38	.050	1.27	.735	18.67
51	161-51-22	.015	.38	.080	2.03	1.030	26.16

COLOUR CODE:
CHART 3

PRINT:
(EXAMPLE FOR
6 PR. 22 AWG)

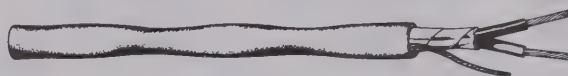
CSA AWM T1 105C PVC 300V FT-4 ALCATEL CANADA WIRE DATASERIES 161-06-22
 MPR 22 AWG 105C SHIELDED (UL) OR **UL** AWM 105C 300V VW-1

**WE CAN SUPPLY ALL YOUR
 REQUIREMENTS FOR INDUSTRIAL
 ELECTRONIC EQUIPMENT AND
 PARTS. WE OFFER A COMPLETE
 LINE WITH UP-TO-DATE STOCK,
 FAST DELIVERY AND PRODUCTION
 QUANTITY PRICING. CALL FOR
 INFORMATION ON NEW OR
 UNLISTED ITEMS.**

**THIS MANUFACTURER HAS ACHIEVED
 ISO 9000 QUALITY SYSTEMS STANDARDS.**

Dataseries® 301

300V	MULTICONDUCTOR	PE INS
80C	O/A SHIELD	PVC JKT
SPECIFICATIONS: CSA AWM T9, AWM 2095 UL SUBJ. 444 MP/CM		FIRE TESTS: FT-1, VW-1 UL 1581 TRAY TEST



DESCRIPTION:

#2, 3 or 4/C tinned copper, polyethylene insulation, conductors cabled, O/A aluminum/Mylar foil shield, tinned copper drain, chrome grey PVC jacket.

NO. OF COND.	SIZE AWG.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER		pF/ft.*	NOMINAL CAPACITANCE			
			in.	mm.	in.	mm.	in.	mm.		pF/m.*	pF/ft.**	pF/m.**	pF/m.**
2	24 (7W)	301-02-24	.015	.38	.025	.64	.167	4.23	18	59	34	111	
2	22 (7W)	301-02-22	.015	.38	.025	.64	.179	4.53	21	69	39	130	
3	22 (7W)	301-03-22	.015	.38	.025	.64	.188	4.77	21	69	39	130	
4	22 (7W)	301-04-22	.015	.38	.025	.64	.204	5.17	21	69	39	130	
2	20 (10W)	301-02-20	.015	.38	.028	.71	.203	5.15	24	79	45	148	
3	20 (10W)	301-03-20	.015	.38	.028	.71	.213	5.42	24	79	45	148	
4	20 (10W)	301-04-20	.015	.38	.028	.71	.232	5.88	24	79	45	148	
2	18 (16W)	301-02-18	.018	.46	.028	.71	.231	5.86	27	89	51	167	
3	18 (16W)	301-03-18	.018	.46	.028	.71	.243	6.18	27	89	51	167	
4	18 (16W)	301-04-18	.018	.46	.028	.71	.265	6.74	27	89	51	167	

COLOUR CODE:

2/C BLACK, NATURAL
 3/C BLACK, RED, NATURAL
 4/C BLACK, RED, GREEN, NATURAL

PRINT:

(EXAMPLE FOR
 3/C 20AWG)

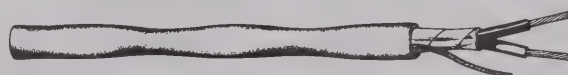
CSA AWM T9 80C PE 300V FT-1 ALCATEL CANADA WIRE DATASERIES 301-03-20
 MP 20 AWG SHIELDED 80C (UL) OR **AWM** 80C 300V VW-1

*CONDUCTOR TO CONDUCTOR

**CONDUCTOR TO SHIELD

Dataseries® 302

300V	MULTICONDUCTOR	FR PE INS
80C	O/A SHIELD	PVC JKT
SPECIFICATIONS: CSA AWM T7 AWM 2095 UL SUBJ. 444 MPR/CMR		FIRE TESTS: FT-4, VW-1 UL 1666 RISER TEST



DESCRIPTION:

#2, 3 or 4/C tinned copper FR, polyethylene insulation, conductors cabled, O/A aluminum/Mylar foil shield, tinned copper drain, chrome grey PVC jacket.

NO. OF COND.	SIZE AWG.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER		pF/ft.*	NOMINAL CAPACITANCE			
			in.	mm.	in.	mm.	in.	mm.		pF/m.*	pF/ft.**	pF/m.**	pF/m.**
2	24 (7W)	302-02-24	.015	.38	.025	.64	.167	4.23	18	59	34	111	
2	22 (7W)	302-02-22	.015	.38	.025	.64	.179	4.53	21	69	39	130	
3	22 (7W)	302-03-22	.015	.38	.025	.64	.188	4.77	21	69	39	130	
4	22 (7W)	302-04-22	.015	.38	.025	.64	.204	5.17	21	69	39	130	
2	20 (10W)	302-02-20	.015	.38	.028	.71	.203	5.15	24	79	45	148	
3	20 (10W)	302-03-20	.015	.38	.028	.71	.213	5.42	24	79	45	148	
4	20 (10W)	302-04-20	.015	.38	.028	.71	.232	5.88	24	79	45	148	
2	18 (16W)	302-02-18	.018	.46	.028	.71	.231	5.86	27	89	51	167	
3	18 (16W)	302-03-18	.018	.46	.028	.71	.243	6.18	27	89	51	167	
4	18 (16W)	302-04-18	.018	.46	.028	.71	.265	6.74	27	89	51	167	

COLOUR CODE:

2/C BLACK, NATURAL
 3/C BLACK, RED, NATURAL
 4/C BLACK, RED, GREEN, NATURAL

PRINT:

(EXAMPLE FOR
 3/C 20AWG)

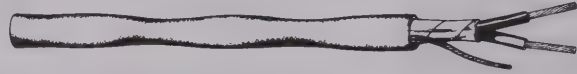
CSA AWM T7 80C PE 300V FT-4 ALCATEL CANADA WIRE DATASERIES 302-03-20
 MP 20 AWG SHIELDED 80C (UL) OR **AWM** 80C 300V VW-1

*CONDUCTOR TO CONDUCTOR

**CONDUCTOR TO SHIELD

Dataseries® 311

600V	MULTICONDUCTOR	PE INS
80C	O/A SHIELD	PVC JKT
SPECIFICATIONS: CSA AWM T9, UL AWM 2463 UL SUBJ. 444 MP/CM (16 AWG ONLY)		FIRE TESTS: FT-1, VW-1 UL 1581 TRAY TEST



DESCRIPTION:

#2, 3 or 4/C tinned copper, polyethylene insulation, conductors, cabled, O/A aluminum/Mylar foil shield, tinned copper drain, chrome grey PVC jacket.

NO. OF COND.	SIZE AWG.	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER		NOMINAL CAPACITANCE			
			in.	mm.	in.	mm.	in.	mm.	pF/ft.*	pF/m.*	pF/ft.**	pF/m.**
2	16 (26W)	311-02-16	.030	.76	.030	.76	.305	7.75	21	69	39	130
3	16 (26W)	311-03-16	.030	.76	.030	.76	.323	8.20	21	69	39	130
4	16 (26W)	311-04-16	.030	.76	.030	.76	.354	8.99	21	69	39	130
2	14 (41W)	311-02-14	.030	.76	.035	.89	.348	8.83	24	79	45	148
3	14 (41W)	311-03-14	.030	.76	.035	.89	.368	9.34	24	79	45	148
2	12 (65W)	311-02-12	.035	.89	.040	1.02	.416	10.57	25	82	47	154
3	12 (65W)	311-03-12	.035	.89	.040	1.02	.441	11.19	25	82	47	154

COLOUR CODE:

2/C BLACK, NATURAL
 3/C BLACK, RED, NATURAL
 4/C BLACK, RED, GREEN, NATURAL

PRINT:

(12 + 14 AWG)
 (EXAMPLE FOR
 4/C 14 AWG)

(16 AWG)
 (EXAMPLE FOR
 3/C 16 AWG)

CSA AWM T9 80C PE 600V FT-1 ALCATEL CANADA WIRE DATASERIES 311-04-14
UL AWM 80C 600V VW-1

*CONDUCTOR TO CONDUCTOR
 **CONDUCTOR TO SHIELD

CSA AWM T9 80C PE 600V FT-1 ALCATEL CANADA WIRE DATASERIES 311-03-16
 MP 16AWG SHIELDED 80C (UL) OR **UL** AWM 80C 600V VW-1

Dataseries® 371

30V	MULTIPAIR	FOAM PE INS
80C	O/A SHIELD	PVC JKT
SPECIFICATIONS: CSA TYPE PCC, UL AWM 2919 UL SUBJ. 444 MPR/CMR		FIRE TESTS: FT-4, VW-1 UL 1666 RISER TEST



DESCRIPTION:

#24 (7W) tinned copper, FR foam polyethylene insulation, pairs cabled, O/A aluminum/Mylar foil shield, #24 (7W) tinned copper drain, chrome grey PVC jacket.

24 GAUGE

NO. OF PAIRS	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER		NOMINAL CAPACITANCE			
		in.	mm.	in.	mm.	in.	mm.	pF/ft.*	pF/m.*	pF/ft.**	pF/m.**
1	371-01-24	.015	.38	.030	.76	.180	4.57	12	39	23	74
2	371-02-24	.015	.38	.030	.76	.254	6.44	12	39	23	74
3	371-03-24	.015	.38	.030	.76	.267	6.79	12	39	23	74
4	371-04-24	.015	.38	.030	.76	.291	7.40	12	39	23	74
5	371-05-24	.015	.38	.030	.76	.320	8.13	12	39	23	74
6	371-06-24	.015	.38	.030	.76	.345	8.76	12	39	23	74
7	371-07-24	.015	.38	.030	.76	.345	8.76	12	39	23	74
8	371-08-24	.015	.38	.030	.76	.380	9.65	12	39	23	74
9	371-09-24	.015	.38	.030	.76	.395	10.03	12	39	23	74
10	371-10-24	.015	.38	.030	.76	.415	10.54	12	39	23	74
12.5	371-12-24	.015	.38	.030	.76	.455	11.56	12	39	23	74
15	371-15-24	.015	.38	.045	1.14	.520	13.21	12	39	23	74
18	371-18-24	.015	.38	.045	1.14	.560	14.22	12	39	23	74

COLOUR CODE:

CHART 6

PRINT:

(EXAMPLE FOR
 6 PR 24 AWG)

CSA TYPE PCC FT-4 ALCATEL CANADA WIRE DATASERIES 371-06-24
 MPR 24AWG SHIELDED 80C (UL) OR **UL** AWM 80C 30V VW-1

*CONDUCTOR TO CONDUCTOR
 **CONDUCTOR TO SHIELD

Dataserie[®] 373

30V	MULTIPAIR	FR FOAM PE INS
80C	O/A SHIELD	PVC JKT
SPECIFICATIONS:		FIRE TESTS:
CSA TYPE PCC,		FT-4,
AWM 2919		VW-1
UL SUBJ. 444 MPR/CMR		UL 1666 RISER TEST



DESCRIPTION:

#24 (7W) tinned copper, FR foam polyethylene insulation, pairs cabled, O/A aluminum/Mylar foil + 65% tinned copper braid shield.
#24 (7W) tinned copper drain, chrome grey PVC jacket.

24 GAUGE

NO. OF PAIRS	PRODUCT NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER		pF/ft.*	NOMINAL CAPACITANCE		
		in.	mm.	in.	mm.	in.	mm.		pF/m*	pF/ft.**	pF/m**
2	373-02-24	.015	.38	.030	.76	.277	7.03	12	39	23	74
3	373-03-24	.015	.38	.030	.76	.290	7.38	12	39	23	74
4	373-04-24	.015	.38	.030	.76	.315	8.00	12	39	23	74
5	373-05-24	.015	.38	.030	.76	.340	8.64	12	39	23	74
6	373-06-24	.015	.38	.030	.76	.370	9.40	12	39	23	74
7	373-07-24	.015	.38	.030	.76	.370	9.40	12	39	23	74
8	373-08-24	.015	.38	.030	.76	.400	10.16	12	39	23	74
10	373-10-24	.015	.38	.030	.76	.440	11.18	12	39	23	74
12.5	373-12-24	.015	.38	.030	.76	.480	12.19	12	39	23	74
15	373-15-24	.015	.38	.045	1.14	.545	13.84	12	39	23	74
18	373-18-24	.015	.38	.045	1.14	.585	14.86	12	39	23	74

COLOUR CODE:
CHART 6

PRINT:
(EXAMPLE FOR
6 PR 24 AWG)

CSA TYPE PCC FT-1 ALCATEL CANADA WIRE DATASERIES 373-06-24
MPR 24AWG SHIELDED 80C (UL) OR AWM 80C 30V VW-1

*CONDUCTOR TO CONDUCTOR
**CONDUCTOR TO SHIELD

Dataserie[®] 374

30V	MULTIPAIR	FR FOAM PE INS
80C	IND. SHIELDS	PVC JKT
SPECIFICATIONS:		FIRE TESTS:
CSA PCC,		FT-4
AWM 2919		VW-1
UL SUBJ. 444 MPR/CMR		UL 1666 RISER TEST



DESCRIPTION:

#24 (7W) tinned copper, FR foam, polyethylene, insulation, pairs individually aluminum/Mylar foil shielded with
#24 (7W) tinned copper drains, cabled, Mylar wrap, chrome grey PVC jacket.

24 GAUGE

NO. OF PAIRS	PART NO.	INSULATION THICKNESS		JACKET THICKNESS		CABLE DIAMETER		pF/ft.*	NOMINAL CAPACITANCE		
		in.	mm.	in.	mm.	in.	mm.		pF/m*	pF/ft.**	pF/m**
2	374-02-24	.024	.61	.030	.76	.355	9.02	12.5	41	24	77
3	374-03-24	.024	.61	.030	.76	.375	9.53	12.5	41	24	77
4	374-04-24	.024	.61	.030	.76	.410	10.41	12.5	41	24	77
6	374-06-24	.024	.61	.030	.76	.490	12.45	12.5	41	24	77
9	374-09-24	.024	.61	.045	1.14	.595	15.11	12.5	41	24	77
11	374-11-24	.024	.61	.045	1.14	.650	16.51	12.5	41	24	77
12	374-12-24	.024	.61	.045	1.14	.670	17.02	12.5	41	24	77
15	374-15-24	.024	.61	.045	1.14	.720	18.29	12.5	41	24	77
17	374-17-24	.024	.61	.045	1.14	.760	19.03	12.5	41	24	77
19	374-19-24	.024	.61	.045	1.14	.795	20.19	12.5	41	24	77
27	374-27-24	.024	.61	.060	1.52	.965	24.51	12.5	41	24	77

COLOUR CODE:
CHART 3

PRINT:
(EXAMPLE FOR
6 PR 24 AWG)

CSA TYPE PCC FT-4 ALCATEL CANADA WIRE DATASERIES 374-06-24
MPR 24AWG SHIELDED 80C (UL) OR AWM 80C 30V VW-1

*CONDUCTOR TO CONDUCTOR
**CONDUCTOR TO SHIELD



Local Area Network Cables— LAN COAXIAL & DATA SYSTEMS

TRUNK-COAXIAL CABLES IEEE 802

Alpha No.	MIL No. RG	Nom. Imped. Ohms	Cap., pF/ft.	Center Conductor			Shields*	Jacket		Price per 1000 ft.
				Mat'l.*	Strand	AWG		Mat'l.*	O. D., Ins.	
9804C	6/U	71	17.3	C	Solid	18	A/M + TC Braid	Black V	.270	\$ 219.39
9104	6/U FEP Plenum	75	17.0	C	Solid	18	A/M/A + TC (90%) Braid	FEP Black Tint	.249	979.80
9858	58 C/U 'Cheaper-net'	50	30.8	TC	19/.0071	20	TC Braid	Black V	.195	363.61
9859	58 C/UFEP* Plenum 'Cheaper-net'	50	25.0	TC	19/.0071	20	A/M/A + TC Braid	Black Tint FEP	.165	468.60
9851C	Ethernet™	50	26.0	TC	Solid	.0855	A/M + TC Braid + A/M/A + TC Braid	Yellow V	.405	761.12
9851F	Ethernet FEP* Plenum	50	24.9	C	Solid	.0855	A/M/A + TC (92%) Braid + A/M/A + TC(92%) Braid	FEP Orange Tint	.375	1533.60
9861C	DEC Thinware™	50	25.4	TC	19/.0076	20	A/M/A + TC Braid	Gray PVC	.180	207.32
9888C	Appletalk™	78	19.7	TC	7/30	22	TC Braid	Beige PVC	.185	254.18
9825C	11/U	75	17.9	CW	Solid	14	A/M/A + TC Braid	Blue V	.405	511.20

Legend

C—Bare copper
TC—Tinned copper
A/M—Aluminum/polyester tape
A/M/A—Aluminum/polyester/aluminum tape
PE—Solid polyethylene
FPE—Cellular (foam) polyethylene
FEP—Fluorinated ethylene propylene
FFEP—Foam fluorinated ethylene propylene
V—Polyvinylchloride—Type 1

Typical Applications

- Data link for high speed interoffice and intraoffice computer communications systems
- Local net installations—CSMA/CD
- Interconnection of diverse types of computer equipment with varying transmission requirements

Applicable Specifications

- IEEE 802.4 Broadband Alpha Nos. 9804, 9104
- IEEE 802.3 Baseband Alpha Nos. 9851, 9860
- IEEE 802.3 10-Base-2 Alpha Nos. 9858, 9859
- Plenum Rated Cables:
UL Subject 13, Type CL2P
- NE 725-38(b)3

TRANSCEIVER/DROP—MULTIPAIR INDIVIDUAL AND OVERALL SHIELD CABLES UL AWM STYLE 2919 NEC TYPE CL2

Alpha No.	Nom. Imped. Ohms	Cap., pF/ft.	Center Conductor			Shields*	Jacket		Price per 1000 ft.
			Mat'l.*	Strand	AWG		Mat'l.*	O. D., Ins.	
9852C	78 (3 pair)	18.0	TC	7/30 7/28	22 (3 pair) 20 (1 pair)	A/M + A/M/A + TC(95%) Braid	Gray V	.340	\$648.94
9853C	78 (3 pair)	18.0	TC	7/28	20	A/M + A/M/A + TC(95%) Braid	Lgt. Gray V	.425	761.12
9854C	78 (3 pair)	19.7	TC	7/36 7/32	28 (3 pair) 24 (1 pair)	A/M + A/M/A + TC (90%) Braid	Gray V	.250	606.34

- Voltage Rating: 30 Volt-AWM, 150 Volt CL2
- Attenuation:
Alpha No. 9852: 4 dB max per 50 meters (at 5-10MHz)
Alpha No. 9853: 3 dB max per 50 meters (at 5-10 MHz)

**WE ARE BETTER ABLE TO SERVICE YOUR NEEDS BY
BELONGING TO EDBA, A NATIONAL BUYING GROUP.**

The IBM Cabling System includes 4 types of cable; Type 1—plenum and non-plenum data cables; Type 2—plenum and non-plenum data and voice cables; Type 6—shielded, two-pair cables with standard conductors; Type 9—two-pair plenum cables. The IBM Cabling System lends itself to a base-band network with a ring topology and a token passing accessing technique. With a ring topology, data is transmitted in only one direction from node to node. The IBM Cabling System offers ideal transmission between nodes to allow for expansion of the network by simply wiring more nodes to the network. All Alpha pairs are individually foil-shielded and covered with an overall braid shield. The twisted pair construction minimizes crosstalk and interference. All of the cables are IBM approved and ETL certified, and meet the IEEE 802.5 Token Passing Ring Standard.



Type 1 Non-Plenum

Type 1 Non-Plenum Cable: For data connections. Low capacitance. Connects terminals in work area to distribution panels. **Shield Material:** Aluminum foil tape, each pair with overall TC braid shield. **Shield Coverage:** 65%. NEC 725-38(b)(1) UL Subject 13, Type CL2.



Type 1 Plenum

Type 1 Plenum Cable: For data connections. Super low capacitance. Used for installations without conduits in plenums, ducts and in open work areas (where permitted by electrical code). **Shield Material:** Aluminum foil tape, each pair with overall TC braid shield. **Shield Coverage:** 65%. NEC 725-38(b)(1) UL Subject 13, Type CL2.



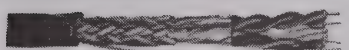
Type 2 Non-Plenum

Type 2 Non-Plenum Cable: For voice and data connections. Installation uses are the same as for Type 1 Non-Plenum cable. Features two data pairs surrounded by four voice-grade cable pairs. **Shield Material:** 2-pair with individual alum. tape and overall TC braid. **Shield Coverage:** 65%. NEC 800-3(b)(1) UL Subject 444, Type CL2.



Type 2 Plenum

Type 2 Plenum Cable: For voice and data connections. Installations are the same as for Type 1 Plenum cable. Features two data pairs surrounded by four voice-grade cable pairs. **Shield Material:** 2-pair with individual alum. tape and overall TC braid. **Shield Coverage:** 65%. NEC 800- (b)(1) UL Subject 444, Type CL2.



Type 6 Non-Plenum

Type 6 Non-Plenum Cable: Two-pair office-grade data cables with standard conductors. Used for patch panel data applications. **Shield Material:** Overall aluminum and TC braid. **Shield Coverage:** 65%. NEC 725-38(b)(1) UL Subject 13, Type CL2.



Type 9 Plenum

Type 9 Plenum Cable: Two data-pair plenum cable. Offers a low-cost alternative to Type 1 Plenum cable. Features two twisted pair. **Shield Material:** Overall aluminum foil and TC braid. **Shield Coverage:** 65%. NEC 725-38(b)(1) UL Subject 13, Type CL2.

Type	Alpha No.	IBM No.	Conductor		Shield		Cable O.D. (in.)	Impedance Ohms @ 4 MHz	Attenuation		Price per 500 ft.
			AWG	Material	Color	Material			dB/100 ft.	@	
Type 1, Non-Plenum	9310	4716748	22	Solid copper	Black	PVC	.390	150	0.66 1.37	4 MHz 16 MHz	\$167.56
Type 1, Plenum	9311	4716749	22	Solid copper	Black tint	Fluoropolymer	.370	150	0.66 1.37	4 MHz 16 MHz	36.68
Type 2, Non-Plenum	9320	4716739	22	Solid copper	Black	PVC	.465	Data, 150	0.66 1.37	4 MHz 16 MHz	254.18
Type 2, Plenum	9321	4716738	22	Solid copper	Black tint	Fluoropolymer	.430	Voice, 100	0.04 0.51	1 kHz 772 KHz	482.80
Type 6, Non-Plenum	9360	4716743	26	7/34 copper	Black	Straited	.330	150	1.00 2.01	4 MHz 16 MHz	141.29
Type 9, Plenum	9390	6339583	26	Solid copper	Black tint	Fluoropolymer	.245	150	1.00 2.10	4 MHz 16 MHz	281.16

**OUR GOAL IS PROVIDING QUALITY PRODUCTS AND SERVICES
TO MEET YOUR NEEDS.**

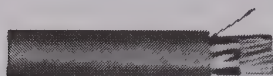


Data Cables Low Capacitance

MULTIPAIR FOIL SHIELD UL 2919, 80°C, 30 V

Applications

- Computer Interconnects
- EIA RS-232, RS-422, RS-423, RS-449
- CAD CAM Systems
- External interconnection of computer or electronic point-of-sale equipment in areas where high levels of noise interference are anticipated.
- Extended Distance



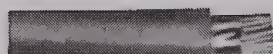
6210/12C



6220/12C



6216C



6230/12C



6228C

**OUR PRICES ARE COMPETITIVE
DUE TO OUR ASSOCIATION WITH
A NATIONAL BUYING GROUP.**

CELLULAR (FOAM) POLYPROPYLENE MULTIPAIR FOIL SHIELD NEC TYPE CL2

24 AWG: (0.23 mm²), 7/32 (7 × 0.20 mm).

Insulation Thickness: 0.12" (0.30 mm).

Standard Put-Up: 500 ft. (152 m), 1000 ft. (305 m).

Color Code: See Chart below.

Alpha No.	No. of Pairs	Normal Jkt. Thick. (In.)	Nom. O.D. (In.)	Nom. Capac. (pf/ft)	Price per 1000 Ft.
6202C	2	.035	.25	22.0	\$ 340.80
6203C	3	.035	.26	22.0	426.00
6204C	4.5	.035	.29	22.0	497.00
6205C	5	.035	.31	22.0	639.00
6206C	6	.035	.34	22.0	795.20
6207C	7	.035	.35	22.0	880.40
6208C	8	.035	.36	22.0	906.80
6209C	9	.035	.39	22.0	852.00
6210C	10	.035	.42	22.0	1065.00
6210/12C	12.5	.035	.43	22.0	1221.20
6210/15C	15	.035	.48	22.0	1633.00
6210/18C	18.5	.050	.53	22.0	1704.00
6210/25C	25	.050	.57	22.0	2556.00

CELLULAR (FOAM) POLYPROPYLENE FOIL SHIELD NEC TYPE CL2

22 AWG: (0.32 mm²), 7/30 (7 × 0.25 mm).

Insulation Thickness: .016" (0.41 mm).

Standard Put-Up: 500 ft. (152 m), 1000 ft. (305 m).

Color Code: See Chart below.

Alpha No.	No. of Pairs	Normal Jkt. Thick. (In.)	Nom. O.D. (In.)	Nom. Capac. (pf/ft)	Price per 1000 Ft.
6212C	2	.035	.29	22.0	\$ 358.34
6213C	3	.035	.31	22.0	428.54
6214C	4.5	.035	.36	22.0	596.40
6215C	5	.035	.37	22.0	710.00
6216C	6	.035	.39	22.0	752.60
6217C	7	.035	.40	22.0	880.40
6218C	8	.035	.42	22.0	906.80
6219C	9	.035	.45	22.0	994.00
6220C	10	.035	.48	22.0	1031.13
6220/12C	12.5	.050	.53	22.0	1420.00
6220/15C	15	.050	.57	22.0	1704.00
6220/18C	18.5	.050	.60	22.0	2130.00
6220/25C	25	.050	.70	22.0	2840.00

CELLULAR (FOAM) POLYPROPYLENE MULTIPAIR OVERALL FOIL/BRAID SHIELD NEC TYPE CL2

24 AWG: (0.23 mm²), 7/32 (7 × 0.20 mm).

Insulation Thickness: .012" (0.30 mm)

Alpha No.	No. of Pairs	Normal Jkt. Thick. (In.)	Nom. O.D. (In.)	Nom. Capac. (pf/ft)	Price per 1000 Ft.
6222C	2	.035	.29	22.0	\$ 326.60
6223C	3	.035	.30	22.0	468.03
6224C	4	.035	.33	22.0	489.90
6225C	5	.035	.34	22.0	653.20
6226C	6	.035	.37	22.0	823.60
6227C	7	.035	.37	22.0	906.80
6228C	8	.035	.41	22.0	923.00
6230C	10	.035	.46	22.0	1102.80
6230/12C	12.5	.035	.48	22.0	1278.00
6230/15C	15	.035	.54	22.0	1704.00
6230/18C	18	.050	.57	22.0	1988.00
6230/25C	25	.050	.65	22.0	2925.20

Pair No.	Color Combination	Pair No.	Color Combination	Pair No.	Color Combination
1	Black/Red	18	Green/Yellow	35	Purple/Slate
2	Black/White	19	White/Blue	36	Purple/Black
3	Black/Green	20	White/Brown	37	Slate/Red
4	Black/Blue	21	White/Orange	38	Slate/White
5	Black/Brown	22	White/Yellow	39	Slate/Green
6	Black/Yellow	23	Blue/Brown	40	Slate/Blue
7	Black/Orange	24	Blue/Orange	41	Slate/Brown
8	Red/Green	25	Blue/Yellow	42	Slate/Yellow
9	Red/White	26	Brown/Orange	43	Slate/Orange
10	Red/Blue	27	Brown/Yellow	44	Slate/Black
11	Red/Yellow	28	Purple/Red	45	White/Black/Red
12	Red/Brown	29	Purple/White	46	White/Black/Green
13	Red/Orange	30	Purple/Green	47	White/Black/Blue
14	Green/Blue	31	Purple/Blue	48	White/Black/Brown
15	Green/White	32	Purple/Brown	49	White/Black/Yellow
16	Green/Brown	33	Purple/Yellow	50	White/Black/Orange
17	Green/Orange	34	Purple/Orange	51	White/Black/Purple

NETWORK CONNECTION KITS



NC-KIT-20

NC-KIT-20— Links Apples to Apples and printers that use 8 DIN to modular RJ11 adapters. Price Each **\$166.45**

NC-KIT-20 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
Cut, Strip and Crimp Tool	1	AT340	1	\$35.56
Modular Plug, RJ11 50 μ " gold	50	MP64	100	17.25
Adapter, DB 9 male/RJ11	5	MA248M	1	18.64
Silver Satin Cable, 4 Cond.	100m	1604	Box 328 Ft.	24.10

NC-KIT-21

NC-KIT-21— Links Apples to Apples and printers that use DB9 to modular RJ11 adapters. Price Each **\$166.45**

NC-KIT-21 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
Cut, Strip and Crimp Tool	1	AT340	1	\$35.56
Modular Plug, RJ11 50 μ " gold	50	MP64	100	17.25
Adapter, DB 9 male/RJ11	5	MA248M	1	18.64
Silver Satin Cable, 4 Cond.	100m	1604	Box 328 Ft.	24.10

NC-KIT-30

NC-KIT-30— Links IBM/compatible PCs to peripherals that use modular RJ45-8 pin jacks. Price Each **\$101.22**

NC-KIT-30 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
Cut, Strip and Crimp Tool	1	AT340	1	\$35.56
Modular Plug, RJ45 50 μ " gold	50	MP88	100	49.20
Silver Satin Cable, 8 Cond.	100m	1608	Box 328 Ft.	38.57

NC-KIT-31

NC-KIT-31— Links IBM/compatible PCs to peripherals that use modular RJ11-4 pin jacks. Price Each **\$79.49**

NC-KIT-31 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
Cut, Strip and Crimp Tool	1	AT340	1	\$35.56
Modular Plug, RJ11 50 μ " gold	50	MP64	100	17.25
Silver Satin Cable, 4 Cond.	100m	1604	Box 328 Ft.	24.10

NC-KIT-32

NC-KIT-32— Links IBM/Compatible PCs to peripherals that use modular RJ11-6 pin jacks. Price Each **\$88.01**

NC-KIT-32 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
Cut, Strip and Crimp Tool	1	AT340	1	\$35.56
Modular Plug, RJ11 50 μ " gold	50	MP66	100	24.14
Silver Satin Cable, 6 Cond.	100m	1606	Box 328 Ft.	28.93

NC-KIT-40

NC-KIT-40— Links computer terminals with peripherals in networks that use RG62A/U coaxial cable. Price Each **\$140.11**

NC-KIT-40 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
Coax, Cut and Strip Tool	1	AT140/3	1	\$34.79
Blade Cassette	1	AT141/3	1	9.94
Ratchet Crimp Tool	1	AT350	1	41.05
BNC Coax Crimp Connector	20	CMC3002	10	24.85
Coaxial Cable RG62A/U	100m	9062AC	Box 328 Ft.	56.96

NC-KIT-41

NC-KIT-41— Links computer terminals with peripherals in networks that use Thin Ethernet cable. Price Each **\$154.08**

NC-KIT-41 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
Coax, Cut and Strip Tool	1	AT140/3	1	\$34.79
Blade Cassette	1	AT141/3	1	9.94
Ratchet Crimp Tool	1	AT350	1	41.05
BNC Coax Crimp Connector	20	CMC3005	10	24.85
Thin Ethernet Cable	100m	9881C	Box 328 Ft.	63.72

NC-KIT-100

NC-KIT-100— Links computer terminals with peripherals in networks that use Level 3, 4 pair 24 AWG stranded UTP cable. Price Each ... **\$113.81**

NC-KIT-100 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
Cut, Strip and Crimp Tool	1	AT340	1	\$35.56
Modular Plug, RJ45 50 μ " gold	50	MP88	100	49.20
Unshielded Twisted Pr/Strand	100m	9314C	Box 328 Ft.	53.31

NC-KIT-101

NC-KIT-101— links computer terminals with peripherals in networks that use Level 3, 4 pair 24 AWG solid UTP cable. Price Each **\$111.03**

NC-KIT-101 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
Cut, Strip and Crimp Tool	1	AT340	1	\$35.56
Modular Plug, RJ45 50 μ " gold	50	MP88-1	100	51.12
Unshielded Twisted Pr/Solid	100m	9304C	Box 328 Ft.	34.93

HOOK-UP WIRE DISPENSING KITS



HU-KIT-20

Alpha's Hook-Up Wire Kits contain an assortment of small spools of wire suitable for military or UL/CSA applications. Hook-Up Wire Kits are designed for use by technicians, engineers and designers in the R & D lab or maintenance shop. Each kit contains five spools of different colored hook-up wire in a unique, rack-mounted dispensing tube. The tube and rack system keeps wire neat, clean and at hand. The kit can be mounted on a bench or wall or used as a tote for portability. The kit includes a cut and strip tool. When refills are required, standard Alpha hook-up wire spools should be used.

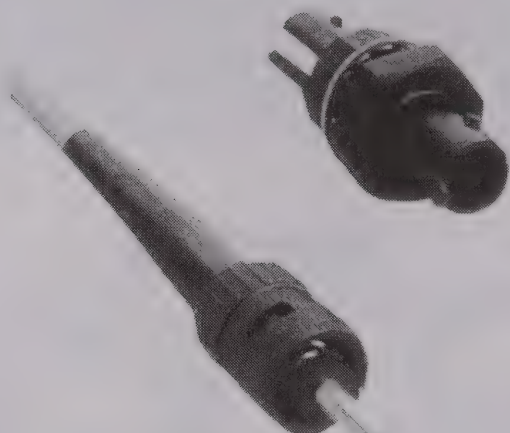
HU-KIT-10— Wire dispensing kit containing assorted colors of 22 AWG stranded MIL spec hook-up wire for use in the R & D lab or maintenance shop. Price Each **\$51.12**

HU-KIT-10 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
MIL-W-76B Type MW/White	100Ft.	1551	100Ft.	\$9.51
MIL-W-76B Type MW/Black	100Ft.	1551	100Ft.	9.51
MIL-W-76B Type MW/Red	100Ft.	1551	100Ft.	9.51
MIL-W-76B Type MW/Green	100Ft.	1551	100Ft.	9.51
MIL-W-76B Type MW/Blue	100Ft.	1551	100Ft.	9.51
Cut and Strip Tool	1	AT210	1	4.90

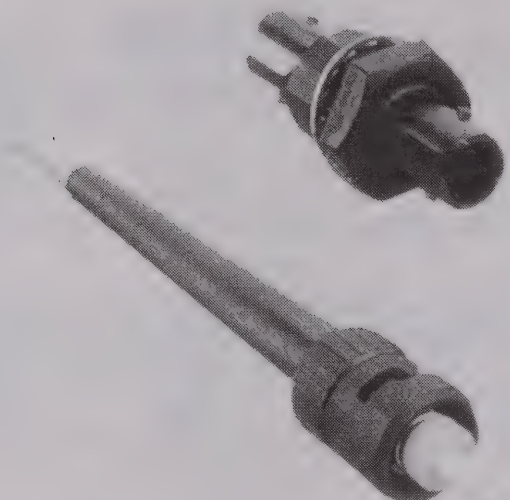
HU-KIT-20— Wire dispensing kit containing assorted colors of 22 AWG stranded UL/CSA hook-up wire for use in the R & D lab or maintenance shop. Price Each **\$51.12**

HU-KIT-20 Contents	Quantity	Reorder Part No.	Reorder Quantity	Price Each
UL 1007, CSA TR64/White	100Ft.	3051	100Ft.	\$8.95
UL 1007, CSA TR64/Black	100Ft.	3051	100Ft.	8.95
UL 1007, CSA TR64/Red	100Ft.	3051	100Ft.	8.95
UL 1007, CSA TR64/Green	100Ft.	3051	100Ft.	8.95
UL 1007, CSA TR64/Blue	100Ft.	3051	100Ft.	8.95
Cut and Strip Tool	1	AT210	1	4.90

ST COMPATIBLE SINGLE-MODE CONNECTORS 953 SERIES



953 Multimode Stainless Steel
ST Compatible



953 Multimode Ceramic
ST Compatible

Specifications:

Connector Loss: 50/125μm fiber 0.14 dB median
62.5/125μm fiber 0.13 dB median
100/140μm fiber 0.08 dB median

Durability: Less than 0.10 dB change after 500 mating cycles

Operating Temperature: -40°C to +80°C

Intermateability: Optically and mechanically compatible with the AT&T-ST and its functional equivalents.

Mfr. No.	Description	Fiber Dia. (μm)
953-101-5005	Red body, single mode	125
953-101-5006	Yellow body, single mode	126
953-101-5007	Green body, single mode	127
953-101-5008	Blue body, single mode	128
953-101-5010	Black body, multimode	128
953-101-5010L	Black body, multimode-loose tube	128
953-101-5011	Gray body, multimode	144
953-102-5001	Stainless steel block body, multimode	128
953-120-5000	Adapter, single mode-zirconia sleeve, black	.....
953-122-5002	Adapter, multimode-phosphor bronze sleeve, beige.	

SMA CONNECTORS

905/906 SERIES



905/906 Series SMA Connectors

Specifications:

SMart™ 905/906 Series

Insertion Loss: 0.3 dB after 100 mating cycles

Housing Material: Stainless steel

Ferrule Material: Ceramic

SMA 905-105 Series

Insertion Loss: 2.0 dB typical

SMA 906-122 Series

Insertion Loss: 0.8 dB after 100 mating cycles

Housing Material: Stainless steel

Ferrule Material: Stainless steel

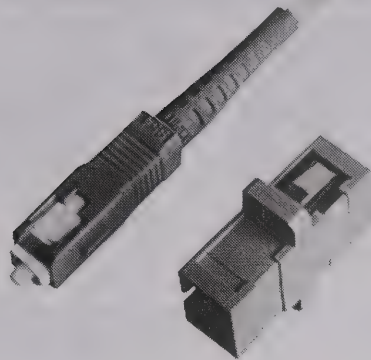
Mfr. No.	Fiber Dia. (μm)	Insertion Loss (dB)
905-150 SERIES STAINLESS STEEL		
905-150-5001	128	2.0
905-150-5002	144	2.0
905 SERIES SMart™ CERAMIC		
905-400-5002	142	0.3
905-400-5007	144	0.8
905-405-5002	126	0.6
905-405-5007	128	0.8
905-405-5008	128	1.0
905-400-5008	144	0.6
905 SERIES LARGE FIBER		
905-149-5001	1000	0.3
906 SERIES SMart™ CERAMIC		
906-500-5002	142	0.3
906-500-5007	144	0.4
906-505-5002	126	0.4
906-505-5007	128	0.5
906-122 SERIES STAINLESS STEEL PRECISION DRILLED		
906-122-5000	140	0.8
906-122-5004	125	1.0

WE CAN SUPPLY ALL YOUR REQUIREMENTS FOR INDUSTRIAL ELECTRONIC EQUIPMENT AND PARTS. WE OFFER A COMPLETE LINE WITH UP-TO-DATE STOCK, FAST DELIVERY AND PRODUCTION QUANTITY PRICING. CALL FOR INFORMATION ON NEW OR UNLISTED ITEMS.

Amphenol®

SC CONNECTORS

954 SERIES



Features:

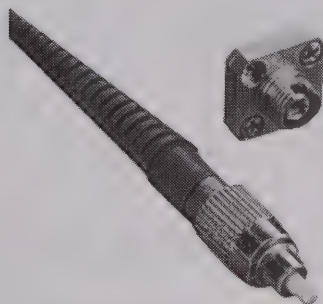
- One-piece construction
- Simple crimp

Specifications:

Connection Loss: 0.24 dB typical, single mode
0.25 dB typical, multimode ceramic
0.70 dB typical, multimode stainless steel
Durability: Less than 0.10 dB change after 500 mating cycles
Operating Temperature: -40°C to +80°C

Mfr. No.	Description	Fiber Dia. (μm)
954-101-5005	Single mode, ceramic ferrule	125
954-101-5006	Single mode, ceramic ferrule	126
954-101-5007	Single mode, ceramic ferrule	127
954-101-5008	Single mode, ceramic ferrule	128
954-101-5010	Multimode, ceramic ferrule	128
954-101-5011	Multimode, ceramic ferrule	144
954-102-5001	Multimode, stainless steel	128
954-102-5002	Multimode, stainless steel	144

FC/PC CONNECTORS



FC/PC Single Mode Connector

Specifications:

Connection Loss: 0.27 dB typical
Durability: Less than 0.11 dB change after 500 mating cycles
Operating Temperature: -40°C to +80°C

Mfr. No.	Description	Fiber Dia. (μm)
944-601-5005	Single mode, zirconia ferrule	125
944-601-5006	Single mode, zirconia ferrule	126
944-125-6000	Feed thru mount adapter	.....
944-120-6000	Flange mount adapter	.....

Fiber Optic Connectors and Termination Kits

TOOL KITS

927 SERIES TERMINATION AND CONSUMABLE KITS



Tooling sets with the convenience of pre-packaged materials. The basic terminations kit contains all common tooling. A specialized add-on kit is required for each connector type. This eliminates duplicate tooling and provides for all termination accessories. Consumable materials are available in pre-packaged kits for 150, 300, 500 and 1000 terminations.

Basic Termination Kit Contents: Jacket and buffer strippers, oven, microscope with adapters, three cavity crimp tool, scribe tool, snips and polishing board. Comes in a carrying case with compartments for all add-on components.

Add-On Termination Kit Contents: Tooling unique to each connector type, cleave tool, polishing and curing fixtures, instructions, and cable preparation template. Are available for 905 SMArt™, 906 SMArt™, FC/PC, 953 series, 905/906 and 954 SC series connectors.

Consumable Kit for Ceramic Ferrule Connectors Contents: 12μm and 3μm lapping film, epoxy, syringes, alcohol wipes and cleaning wire.

Consumable Kit for Stainless Steel SMA's Contents: 15μm, 3μm, and 1μm lapping film, epoxy, alcohol wipes and cleaning wire.

Mfr. No.	Description
927-100-5000	Basic termination kit

ADD-ON KITS

Mfr. No.	Description
927-100-2050	For 905 SMArt™ connector
927-100-2051	For 906 SMArt™ connector
927-100-2052	For FC/PC connector
927-100-2053	For 953 series ST [®] connector
927-100-2054	For 905/906 SMA connector
927-100-2055	For 954 connector

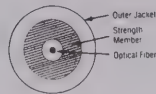
CONSUMABLE KITS FOR CERAMIC FERRULE CONNECTORS

Mfr. No.	Description
927-1301-0150	150 terminations
927-1301-0300	300 terminations
927-1301-0500	500 terminations
927-1301-1000	1000 terminations

CONSUMABLE KITS FOR STAINLESS STEEL SMA'S

Mfr. No.	Description
927-1300-0150	150 terminations
927-1300-0300	300 terminations
927-1300-0500	500 terminations
927-1300-1000	1000 terminations

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EQUIPMENT OR COMPONENT NEEDS.



BITLITE® CABLES

SINGLE MODE/125/900 MICRON (CORE/CLAD/BUFFER)

Maximum attenuation dB/Km @ 1310/1550nm: 0.5/0.4
Maximum dispersion ps/nm-km @ 1310/1550nm: 2.8/18

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
221161	OFNR	1	6	125	35	PVC
221162	OFNR	2	12	250	70	PVC
221811	OFNP	1	6	125	35	FA
221812	OFNP	2	12	250	70	FA

50/125/900 MICRON (CORE/CLAD/BUFFER)

Meets FDDI Optical Specifications
Numerical aperture: .20
Maximum attenuation dB/km @ 850/1200nm: 3.5/1.0
Bandwidth MHz-km @ 850/1300nm: 500/500

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
227161	OFNR	1	6	125	35	PVC
227162	OFNR	2	12	250	70	PVC
227811	OFNP	1	6	125	35	FA
227812	OFNP	2	12	250	70	FA

62.5/125/900 MICRON (CORE/CLAD/BUFFER)

Meets IBM 3044 Channel Extender and FDDI Optical Specification
Numerical aperture: .275
Maximum attenuation dB/km @ 850/1300nm: 3.5/1.0
Bandwidth MHz-km @ 850/1300nm: 160/500

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
225181	OFNR	1	6	125	35	PVC
225182	OFNR	2	12	250	70	PVC
225811	OFNP	1	6	125	35	FA
225812	OFNP	2	12	250	70	FA

100/140/900 MICRON (CORE/CLAD/BUFFER)

Numerical aperture: .29
Maximum attenuation dB/km @ 850/1300nm: 5.0/4.0
Bandwidth MHz-km @ 850/1300nm: 100/200

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
226161	OFNR	1	6	125	35	PVC
226162	OFNR	2	12	250	70	PVC
226811	OFNP	1	6	125	35	FA
226812	OFNP	2	12	250	70	FA

LANLITE™ CABLES

SINGLE MODE/125/900 MICRON (CORE/CLAD/BUFFER)

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
550267	OFNR	2	12	100	14	PVC
221802	OFNP	2	13	100	14	FA

50/125/900 MICRON (CORE/CLAD/BUFFER)

Meets FDDI Optical Specifications

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
550259	OFNR	2	12	100	14	PVC
227802	OFNP	2	13	100	14	FA

62.5/125/900 MICRON (CORE/CLAD/BUFFER)

Meets IBM 3044 Channel Extender and FDDI Optical Specifications

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
550263	OFNR	2	12	100	14	PVC
550264	OFNR	4	12	100	14	PVC
550265	OFNR	6	16	125	19	PVC
550266	OFNR	12	28	150	33	PVC
225802	OFNP	2	13	100	14	FA
550276	OFNP	4	14	100	14	FCP
550277	OFNP	6	29	125	19	FCP
550278	OFNP	12	33	150	33	FCP

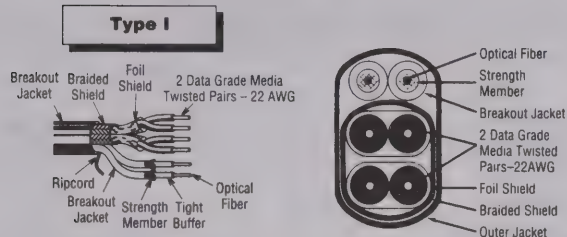
PVC = Polyvinylchloride; FA = Flamarrest; FCP = Fluorocopolymer

THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS
WE HAVE AVAILABLE. PLEASE
CONTACT US FOR ADDITIONAL PRODUCT INFORMATION.

Not authorized at all locations. Please call for
complete information.

SUPERLITE™ CABLES

TYPE I WITH 2-62.5 BREAKOUTS

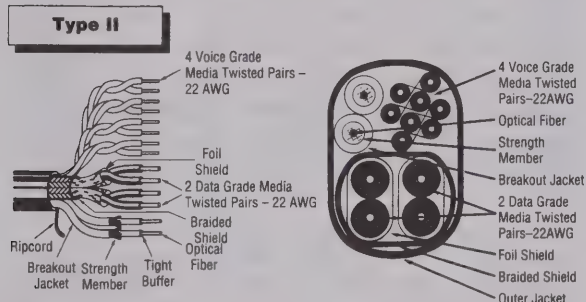


Fiber elements meet IBM Channel Extender and FDDI Optical Specifications

Numerical aperture: .275
Maximum attenuation dB/km (a 850/1300nm: 3.5/1.0
Bandwidth MHz-km (a 850/1300nm: 160/500
Minimum bend radius inches:
Installation: 4.0
Long-term application: 4.0
Strength member: Kevlar®

Belden No.	NEC Type	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum Recommended Load-Lbs.		Outer Jacket*
				Installation	Long-Term Application	
229688	CMR-OF	2	70	120	40	PVC
229888	CMP-OF	2	65	120	40	FCP

TYPE II WITH 2-62.5 BREAKOUTS

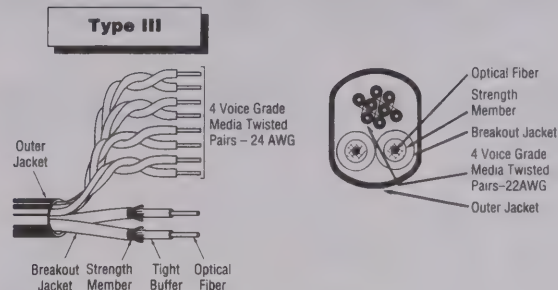


Fiber elements meet IBM Channel Extender and FDDI Optical Specifications

Numerical aperture: .275
Maximum attenuation dB/km (a 850/1300nm: 3.5/1.0
Bandwidth MHz-km (a 850/1300nm: 160/500
Minimum bend radius inches:
Installation: 5.0
Long-term application: 5.0
Strength member: Kevlar®

Belden No.	NEC Type	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum Recommended Load-Lbs.		Outer Jacket*
				Installation	Long-Term Application	
229689	CMR-OF	2	99	146	50	PVC
229889	CMP-OF	2	86	146	50	FCP

TYPE III WITH 2-62.5 BREAKOUTS



Fiber elements meet IBM Channel Extender and FDDI Optical Specifications

Numerical aperture: .275
Maximum attenuation dB/km (a 850/1300nm: 3.5/1.0
Bandwidth MHz-km (a 850/1300nm: 160/500
Minimum bend radius inches:
Installation: 3.0
Long-term application: 3.0
Strength member: Kevlar®

Belden No.	NEC Type	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum Recommended Load-Lbs.		Outer Jacket*
				Installation	Long-Term Application	
229154	CMR-OF	2	32	120	40	PVC
229855	CMP-OF	2	31	120	40	FCP

*PVC = Polyvinylchloride; FCP = Fluorocopolymer

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.

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BREAKOUT CABLES

SINGLE MODE/125/900 MICRON (CORE/CLAD/BUFFER)

Maximum attenuation dB/km @ 1310/1550nm: 0.5/0.4
Maximum dispersion ps/nm-km @ 1310/1550nm: 2.8/18

Belden No.	No. NEC Type	Wt. of Fibers	Lbs 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
221302	OFNR	2	17.0	150	25	PVC
221304	OFNR	4	31.5	290	90	PVC
221306	OFNR	6	52.5	380	115	PVC
221308	OFNR	8	66.0	480	145	PVC
221310	OFNR	10	108	575	175	PVC
221312	OFNR	12	76	575	175	PVC
221318	OFNR	18	133	960	290	PVC
221324	OFNR	24	180	1250	375	PVC
221864	OFNP	4	35	290	90	FCP
221866	OFNP	6	53	535	160	FCP
221868	OFNP	8	76	630	190	FCP
221863	OFNP	10	106	1000	300	FCP
221865	OFNP	12	138	1100	330	FCP

BREAKOUT CABLES

62.5/125/900 MICRON (CORE/CLAD/BUFFER)

Meets IBM 3044 Channel Extender and FDDI Optical Specifications

Maximum attenuation dB/km @ 850/1300nm: 3.5/1.0
Bandwidth MHz-km @ 850/1300nm: 160/500

Belden No.	No. NEC Type	Wt. of Fibers	Lbs 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
225362	OFNR	2	17.0	150	25	PVC
225364	OFNR	4	31.5	290	90	PVC
225366	OFNR	6	52.5	380	115	PVC
225368	OFNR	8	66.0	480	145	PVC
225363	OFNR	10	108	575	175	PVC
225365	OFNR	12	76	575	175	PVC
225367	OFNR	18	133	960	290	PVC
225369	OFNR	24	180	1250	375	PVC
225864	OFNP	4	35	290	90	FCP
225866	OFNP	6	53	535	160	FCP
225868	OFNP	8	76	630	190	FCP
225863	OFNP	10	106	1000	300	FCP
225865	OFNP	12	138	1100	330	FCP

50/125/900 MICRON (CORE/CLAD/BUFFER)

Meets FDDI Optical Specifications

Maximum attenuation dB/km @ 850/1300nm: 3.5/1.0
Bandwidth MHz-km @ 850/1300nm: 500/500

Belden No.	No. NEC Type	Wt. of Fibers	Lbs 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
227302	OFNR	2	17.0	150	25	PVC
227304	OFNR	4	31.5	290	90	PVC
227306	OFNR	6	52.5	380	115	PVC
227308	OFNR	8	66.0	480	145	PVC
227310	OFNR	10	108	575	175	PVC
227312	OFNR	12	76	575	175	PVC
227318	OFNR	18	133	960	290	PVC
227324	OFNR	24	180	1250	375	PVC
227864	OFNP	4	35	290	90	FCP
227866	OFNP	6	53	535	160	FCP
227868	OFNP	8	76	630	190	FCP
227863	OFNP	10	106	1000	300	FCP
227865	OFNP	12	138	1100	330	FCP

100/140/900 MICRON (CORE/CLAD/BUFFER)

Maximum attenuation dB/km @ 850/1300nm: 5.0/4.0
Bandwidth MHz-km @ 850/1300nm: 100/200

Belden No.	No. NEC Type	Wt. of Fibers	Lbs 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket
				Installation	Long-Term Application	
226302	OFNR	2	17.0	150	25	PVC
226304	OFNR	4	31.5	290	90	PVC
226306	OFNR	6	52.5	380	115	PVC
226308	OFNR	8	66.0	480	145	PVC
226310	OFNR	10	108	575	175	PVC
226312	OFNR	12	76	575	175	PVC
226318	OFNR	18	133	960	290	PVC
226324	OFNR	24	180	1250	375	PVC
226864	OFNP	4	45	290	90	FCP
226866	OFNP	6	53	535	160	FCP
226868	OFNP	8	76	630	190	FCP
226863	OFNP	10	106	1000	300	FCP
226865	OFNP	12	138	1100	330	FCP

Not authorized at all locations. Please call for complete information.

INTERBUILDING TRUNK CABLES

SINGLE MODE/125/250 MICRON (CORE/CLAD/COATING) ALL DIELECTRIC—MFPT

Maximum attenuation dB/km (α 1310/1550 nm: 0.5/0.4
Maximum dispersion ps/nm-km (α 1310/1550 nm: 2.8/18

Belden No.	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket*
			Installation	Long-Term Application	
221704	4	50	600	140	PE
221706	6	50	600	140	PE
221708	8	70	600	140	PE
221710	10	70	600	140	PE
221712	12	70	600	140	PE
221716	16	70	600	140	PE
221718	18	70	600	140	PE
221724	24	70	600	140	PE
221736	36	70	600	140	PE
221748	48	85	600	140	PE
221760	60	105	600	140	PE
221772	72	125	600	140	PE

SINGLE MODE/125/250 MICRON (CORE/CLAD/COATING) ARMORED—MFPT

Maximum attenuation dB/km (α 1310/1550nm: .45/.35
Maximum dispersion ps/nm-km (α 1310/1550nm: 2.8/18

Belden No.	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket*
			Installation	Long-Term Application	
221902	2	120	600	140	HDPE
221904	4	120	600	140	HDPE
221906	6	120	600	140	HDPE
221908	8	140	600	140	HDPE
221910	10	140	600	140	HDPE
221912	12	140	600	140	HDPE
221916	16	140	600	140	HDPE
221918	18	140	600	140	HDPE
221924	24	140	600	140	HDPE
221936	36	140	600	140	HDPE
221948	48	170	600	140	HDPE
221960	60	210	600	140	HDPE
221972	72	235	600	140	HDPE

50/125/250 MICRON (CORE/CLAD/COATING) ALL DIELECTRIC—MFPT



Meets FDDI Optical Specifications

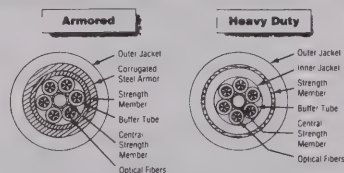
Maximum attenuation dB/km (α 850/1300nm: 3.0/1.0
Bandwidth MHz-km (α 850/1300nm: 500/500

Belden No.	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket*
			Installation	Long-Term Application	
227714	4	50	600	140	PE
227716	6	50	600	140	PE
227718	8	70	600	140	PE
227713	10	70	600	140	PE
227715	12	70	600	140	PE
227717	18	70	600	140	PE
227724	24	70	600	140	PE
227736	36	70	600	140	PE
227748	48	85	600	140	PE
227760	60	105	600	140	PE
227772	72	125	600	140	PE

SINGLE MODE/125/250 MICRON (CORE/CLAD/COATING) ALL DIELECTRIC HEAVY DUTY—MFPT

Maximum attenuation dB/km (α 1310/1550nm: 0.5/0.4
Maximum dispersion ps/nm-km (α 1310/1550nm: 2.8/18

Belden No.	NEC Type	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum-Recommended Load—Lbs.		Inner/ Outer Jacket*
				Installation	Long-Term Application	
221411		1	25	200	40	PVC/ PE
221432		2	40	400	80	PVC/ PE
221402		2	60	400	80	PVC/ PE
221404		4	70	600	180	PE/ PE
221406		6	70	600	180	PE/ PE
221408		8	95	600	180	PE/ PE
221410		10	95	600	180	PE/ PE
221412		12	95	600	180	PE/ PE
221416		16	95	600	180	PE/ PE
221418		18	95	600	180	PE/ PE
221424		24	95	600	180	PE/ PE
221436		36	95	600	180	PE/ PE
221448		48	115	600	180	PE/ PE
221460		60	135	600	180	PE/ PE
221472		72	160	600	180	PE/ PE



50/125/250 MICRON (CORE/CLAD/COATING) ARMORED—MFPT

Meets FDDI Optical Specifications
Maximum attenuation dB/km (α 850/1300nm: 3.0/1.0
Bandwidth MHz-km (α 850/1300nm: 500/500

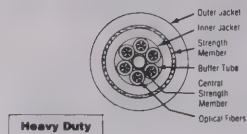
Belden No.	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum-Recommended Load—Lbs.		Outer Jacket*
			Installation	Long-Term Application	
227902	2	120	600	140	HDPE
227904	4	120	600	140	HDPE
227906	6	120	600	140	HDPE
227908	8	140	600	140	HDPE
227910	10	140	600	140	HDPE
227912	12	140	600	140	HDPE
227918	18	140	600	140	HDPE
227924	24	140	600	140	HDPE
227936	36	140	600	140	HDPE
227948	48	170	600	140	HDPE
227960	60	210	600	140	HDPE
227972	72	235	600	140	HDPE

* PVC = Polyvinylchloride; PE = Polyethylene; HDPE = High density polyethylene

Not authorized at all locations. Please call for complete information.

INTERBUILDING TRUNK CABLES

50/125/250 MICRON (CORE/CLAD COATING) ALL DIELECTRIC HEAVY DUTY—MFPT



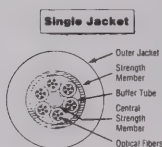
Meets FDDI Optical Specifications

Maximum attenuation dB/km @ 850/
1300nm: 3.0/1.0
Bandwidth MHz-km @ 850/1300nm: 500/
500
Strength member: FGE/Aramid

Belden No.	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum recommended Load—Lbs.		Inner Jacket
			Installation	Long-Term Application	
227411	1	25	300	40	PVC
229657	2	40	500	80	PE
227412	2	60	600	80	PVC
227414	4	70	600	180	PE
227416	6	70	600	180	PE
227418	8	95	600	180	PE
227413	10	95	600	180	PE
227415	12	95	600	180	PE
227417	18	95	600	180	PE
227424	24	95	600	180	PE
227436	36	95	600	180	PE
227448	48	115	600	180	PE
227460	60	135	600	180	PE
227472	72	160	600	180	PE

62.5/125/250 MICRON (CORE/CLAD/COATING) ALL DIELECTRIC—MFPT

Meets IBM 3044 Channel Extender and FDDI Optical Specifications



Numerical aperture: .275
Maximum attenuation dB/km @ 850/1300nm: 3.5/1.0
Bandwidth MHz-km @ 850/1300nm: 160/500
Minimum bend radius inches:
Installation: 20 × dia.
Long-term application: 10 × dia.
Strength member: FGE/Aramid
4 and 6 fiber cables are single fiber per tube.

Belden No.	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket
			Installation	Long-Term Application	
225714	4	50	600	140	PE
225716	6	50	600	140	PE
225718	8	70	600	140	PE
225713	10	70	600	140	PE
225715	12	70	600	140	PE
225717	18	70	600	140	PE
225724	24	70	600	140	PE
227736	36	70	600	140	PE
227748	48	85	600	140	PE
227760	60	105	600	140	PE
225772	72	125	600	140	PE

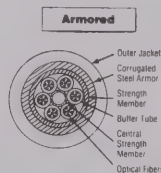
62.5/125/250 MICRON (CORE/CLAD/COATING) ALL DIELECTRIC HEAVY DUTY—MFPT

Meets IBM 3044 Channel Extender and FDDI Optical Specifications
Maximum attenuation dB/km @ 850/1300nm: 3.5/1.0
Bandwidth MHz-km @ 850/1300nm: 160/500
Strength member: FGE/Aramid

Belden No.	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum Recommended Load—Lbs.		Inner Jacket
			Installation	Long-Term Application	
225411	1	25	300	40	PVC
225432	2	35	500	80	PE
225412	2	60	600	80	PVC
225414	4	70	600	180	PE
225416	6	70	600	180	PE
225418	8	95	600	180	PE
225413	10	95	600	180	PE
225415	12	95	600	180	PE
225417	18	95	600	180	PE
225424	24	95	600	180	PE
225436	36	95	600	180	PE
225448	48	115	600	180	PE
225460	60	135	600	180	PE
225472	72	160	600	180	PE

62.5/125/250 MICRON (CORE/CLAD/COATING) ARMORED—MFPT

Meets IBM 3044 Channel Extender and FDDI Optical Specifications



Numerical aperture: .275
Maximum attenuation dB/km @ 850/1300nm: 3.5/1.0
Bandwidth MHz-km @ 850/1300nm: 160/500
Minimum bend radius inches:
Installation: 20 × dia.
Long-term application: 15 × dia.
Strength member: FGE/Aramid
Armor: Corrugated steel
2 thru 6 fiber cables are single fiber per tube.

Belden No.	No. of Fibers	Wt. Lbs./ 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket
			Installation	Long-Term Application	
225902	2	120	600	140	HDPE
225904	4	120	600	140	HDPE
225906	6	120	600	140	HDPE
225908	8	140	600	140	HDPE
225910	10	140	600	140	HDPE
225912	12	140	600	140	HDPE
225918	18	140	600	140	HDPE
225924	24	140	600	140	HDPE
225936	36	140	600	140	HDPE
225948	48	170	600	140	HDPE
225960	60	210	600	140	HDPE
225972	72	235	600	140	HDPE

PVC = Polyvinylchloride; PE = Polyethylene; HDPE = High density polyethylene

Not authorized at all locations. Please call for complete information.

DECONNECT* CABLES

62.5/125/900 MICRON (CORE/CLAD/BUFFER) ZIPCORD JUMPER



Meets FDDI Optical Specifications

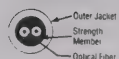
Numerical aperture: .275

Maximum attenuation dB/km (a 850/1300nm: 3.5/1.0

Bandwidth MHz-km (a 850/1300nm: 160/500

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket†
				Installation	Long-Term Application	
550311	OFNR	2	12	240	70	PVC

62.5/125/900 MICRON (CORE/CLAD/BUFFER) ROUND JUMPER



Meets FDDI Optical Specifications

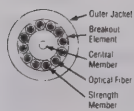
Numerical aperture: .275

Maximum attenuation dB/km (a 850/1300nm: 3.5/1.0

Bandwidth MHz-km (a 850/1300nm: 160/500

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket†
				Installation	Long-Term Application	
550312	OFNR	2	12	100	14	PVC

62.4/125/900 MICRON (CORE/CLAD/BUFFER) HEAVY-DUTY (BREAKOUT)



Meets FDDI Optical Specifications

Numerical aperture: .275

Maximum attenuation dB/km (a 850/1300nm: 3.5/1.0

Bandwidth MHz-km (a 850/1300nm: 160/500

Minimum bend radius inches:

Installation: 15 × dia.

Long-term application: 10 × dia. For FCP, 15 × dia.

Strength member: FGE/Kevlar®

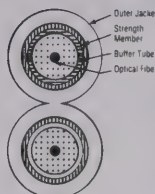
Subunit dia. mm: 2.0

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket†
				Installation	Long-Term Application	
550313	OFNR	4	32	240	70	PVC
550315	OFNR	6	38	535	160	PVC
550317	OFNR	12	101	1100	330	PVC
550314	OFNP	4	28	240	70	FCP
550316	OFNP	6	41	535	160	FCP
550318	OFNP	12	101	1100	330	FCP

* Digital Equipment Corporation trademark.

GENERAL PURPOSE CABLES

50/125/250 MICRON (CORE/CLAD/COATING)



Meets FDDI Optical Specifications

Product Specifications

Numerical aperture: .20

Maximum attenuation dB/km (a 850/1300nm: 3.0/1.0

Bandwidth MHz-km (a 850/1300nm: 500/500

Minimum bend radius inches:

Installation: 4

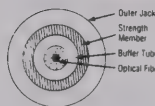
Long-term application: 2

Strength member: Kevlar®

Subunit dia. mm: 2.0

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket†
				Installation	Long-Term Application	
227201	OFN	1	8.5	150	10	PVC
227202	OFN	2	17	250	20	PVC

62.5/125/250 MICRON (CORE/CLAD/COATING)



Meets IBM 3044 Channel Extender and FDDI Optical Specifications

Product Specifications

Numerical aperture: .275

Maximum attenuation dB/km (a 850/1300nm: 3.5/1.0

Bandwidth MHz-km (a 850/1300nm: 160/500

Minimum bend radius inches:

Installation: 4

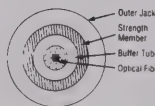
Long-term application: 2

Strength member: Kevlar®

Subunit dia. mm: 2.0

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket†
				Installation	Long-Term Application	
225201	OFN	1	8.5	150	10	PVC
225202	OFN	2	17	250	20	PVC

100/140/250 MICRON (CORE/CLAD/COATING)



Product Specifications

Numerical aperture: .29

Maximum attenuation dB/km (a 850/1300nm: 5.0/4.0

Bandwidth MHz-km (a 850/1300nm: 100/200

Minimum bend radius inches:

Installation: 4

Long-term application: 2

Strength member: Kevlar®

Subunit dia. mm: 2.0

Belden No.	NEC Type	No. of Fibers	Wt. Lbs/ 1000 Ft.	Maximum Recommended Load—Lbs.		Outer Jacket†
				Installation	Long-Term Application	
226021	OFN	1	8.5	150	10	PVC
226022	OFN	2	17	250	20	PVC

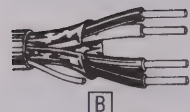
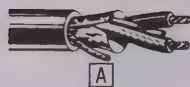
† PVC = Polyvinylchloride; FCP = Fluorocopolymer

**WE CARRY MOST
MAJOR BRANDS. IF YOU CAN'T FIND WHAT YOU WANT,
CALL US FOR INFORMATION.**

**Not authorized at all locations. Please call for
complete information.**

DATELENE™ INSULATED INDIVIDUALLY SHIELDED PAIRED COMPUTER CABLES

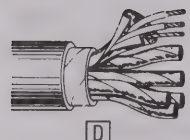
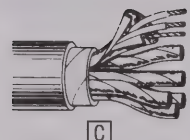
Types 9182 and 9184: tinned copper, Datalene insulated, twisted pair(s), overall Duofoil shield, black PVC jacket. All other types: tinned copper, Datalene, twisted pairs individually shielded with Beldfoil shield with drain wire, chrome PVC jacket.



Belden Number	NEC Type	Fig.	Nom. Imp., Ohms	Vel. of Prop. %	Nominal		Conductors AWG/Strands	No. of Pairs	Nom. O.D. (In.)
					Cap.,† pF/Ft.	Cap.,‡ pF/Ft.			
9182	CL2X	A	150	78	8.8	15	22 (19 × 34)	1	.250
9184	CM	B	150	78	8.8	15	22 (Solid)	2	.385
9729	CM	C	100	78	12.5	22	24 (7 × 32)	2	.335
9730	CM	D	100	78	12.5	22	24 (7 × 32)	3	.345
9728	CM	D	100	78	12.5	22	24 (7 × 32)	4	.404
9731	CM	D	100	78	12.5	22	24 (7 × 32)	6	.476
9732	CM	D	100	78	12.5	22	24 (7 × 32)	9	.570
9733	CM	D	100	78	12.5	22	24 (7 × 32)	11	.610
9734	CM	D	100	78	12.5	22	24 (7 × 32)	12	.630
9735	CM	D	100	78	12.5	22	24 (7 × 32)	15	.700
9736	CM	D	100	78	12.5	22	24 (7 × 32)	17	.730
9737	CM	D	100	78	12.5	22	24 (7 × 32)	19	.750
9738	CM	D	100	78	12.5	22	24 (7 × 32)	27	.875

DATELENE INSULATED MULTICONDUCTOR OVERALL SHIELDED COMPUTER CABLES

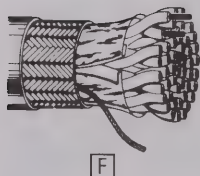
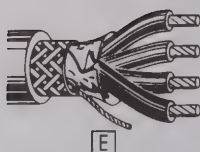
Tinned copper, Datalene insulated multiconductor cable with overall Beldfoil plus tinned copper braid shield with drain wire, chrome PVC jacket.



Belden Number	NEC Type	Fig.	Nom. Imp., Ohms	Vel. of Prop. %	Nominal		Conductor(s)		Nom. O.D. (In.)
					Cap.,† pF/Ft.	Cap.,‡ pF/Ft.	AWG/Strands	No.	
9791	CL2	E	.....	78	12	22	28 (7 × 36)	6	.235
9925	CM	E	.....	78	12	22	24 (7 × 36)	3	.215
9927	CM	E	.....	78	12	22	24 (7 × 36)	4	.230
9929	CM	E	.....	78	12	22	24 (7 × 36)	5	.246
9931	CM	E	.....	78	12	22	24 (7 × 36)	6	.265
9932	CM	E	.....	78	12	22	24 (7 × 36)	7	.265
9933	CM	E	.....	78	12	22	24 (7 × 36)	8	.280
9934	CM	E	.....	78	12	22	24 (7 × 36)	9	.300
9935	CM	E	.....	78	12	22	24 (7 × 36)	10	.320
9936	CM	E	.....	78	12	22	24 (7 × 36)	15	.360
9937	CM	E	.....	78	12	22	24 (7 × 36)	25	.445
9938	CM	E	.....	78	12	22	24 (7 × 36)	37	.500

DATELENE INSULATED MULTIPAIR OVERALL SHIELDED CABLES

Tinned copper, Datalene insulated multipaired cable with overall Beldfoil plus tinned copper braid shield with drain wire, chrome PVC jacket.



Belden Number	NEC Type	Fig.	Nom. Imp., Ohms	Vel. of Prop. %	Nominal		Conductors AWG/Strands	No. of Pairs	Nom. O.D. (In.)
					Cap.,† pF/Ft.	Cap.,‡ pF/Ft.			
8132	CL2	F	120	78	11	20	28 (7 × 36)	2	.260
8133	CL2	F	120	78	11	20	28 (7 × 36)	3	.270
8134	CL2	F	120	78	11	20	28 (7 × 36)	4	.290
8135	CL2	F	120	78	11	20	28 (7 × 36)	5	.300
8138	CL2	F	120	78	11	20	28 (7 × 36)	8	.350
8142	CL2	F	120	78	11	20	28 (7 × 36)	12½	.415
8148	CL2	F	120	78	11	20	28 (7 × 36)	18	.490
8155	CL2	F	120	78	11	20	28 (7 × 36)	25	.565
8102	CM	F	100	78	12.5	22	24 (7 × 32)	2	.290
8103	CM	F	100	78	12.5	22	24 (7 × 32)	3	.305
8104	CM	F	100	78	12.5	22	24 (7 × 32)	4	.330
8105	CM	F	100	78	12.5	22	24 (7 × 32)	5	.340
8106	CM	F	100	78	12.5	22	24 (7 × 32)	6	.370
8107	CM	F	100	78	12.5	22	24 (7 × 32)	7	.370
8108	CM	F	100	78	12.5	22	24 (7 × 32)	8	.410
8110	CM	F	100	78	12.5	22	24 (7 × 32)	10	.460
8112	CM	F	100	78	12.5	22	24 (7 × 32)	12½	.480
8115	CM	F	100	78	12.5	22	24 (7 × 32)	15	.540
8118	CM	F	100	78	12.5	22	24 (7 × 32)	18	.570
8125	CM	F	100	78	12.5	22	24 (7 × 32)	25	.650

†Capacitance between conductors. ‡Capacitance between one conductor and other conductors connected to shield. §Plus extra single conductor.

PLENUM—PAIRED OVERALL FOIL/BRAID SHIELD

Tinned copper foamed Teflon insulated, twisted pairs. Overall Beldfoil aluminum-polyester shield with a 65% tinned copper polyester shield. 24AWG stranded tinned copper drain wire. Gray tint FEP Teflon jacket. 300V RMS.

Belden Number	NEC Type	Fig.	Conductor(s) AWG/Strands	No. of Pairs	Nominal		Nom. O.D. (In.)
					Cap.,† pF/Ft.	Cap.,‡ pF/Ft.	
88106	CMP	F	24 (7 × 32)	6	12.95	24.5	.295
88107	CMP	F	24 (7 × 32)	7½	12.06	.....	.295
88109	CMP	F	24 (7 × 32)	9	12.06	.....	.368
88112	CMP	F	24 (7 × 32)	12½	12.95	.....	.414
88118	CMP	F	24 (7 × 32)	18½	12.95	.....	.499
88125	CMP	F	24 (7 × 32)	25	12.06	.....	.607

†Capacitance between conductors. ‡Capacitance between one conductor and other conductors connected to shield.

Not authorized at all locations. Please call for complete information.

S-R PVC MULTICONDUCTOR OVERALL SHIELDED CABLES

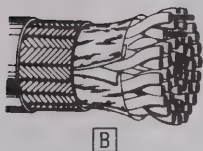
Tinned copper, S-R PVC insulated, overall Beldfoil® shield plus tinned copper braid shield, chrome PVC jacket.



Belden Number	NEC Type	Fig.	Conductor(s) AWG/Strands	No. of Conds.	Nominal		Nom. O.D. (In.)
					Cap., [†] pF/Ft.	Cap., [‡] pF/Ft.	
9637	CL2	A	28(7 × 36)	25	26	47	.305
9608	CM	A	24(7 × 32)	3	35	65	.190
9609	CM	A	24(7 × 32)	4	35	65	.200
9610	CM	A	24(7 × 32)	5	35	65	.210
9611	CM	A	24(7 × 32)	6	30	55	.225
9612	CM	A	24(7 × 32)	7	39	55	.225
9613	CM	A	24(7 × 32)	8	30	55	.240
9614	CM	A	24(7 × 32)	9	30	55	.255
9615	CM	A	24(7 × 32)	10	30	55	.270
9616	CM	A	24(7 × 32)	15	30	55	.300
9617	CM	A	24(7 × 32)	25	30	55	.370
9618	CM	A	24(7 × 32)	37	30	55	.410
9619	CM	A	24(7 × 32)	50	30	55	.485
9939	CM	A	22(7 × 30)	3	37	67	.202
9940	CM	A	22(7 × 30)	4	37	67	.215
9941	CM	A	22(7 × 30)	5	37	67	.230
9942	CM	A	22(7 × 30)	6	35	63	.245
9943	CM	A	22(7 × 30)	7	35	63	.245
9944	CM	A	22(7 × 30)	8	35	63	.260
9945	CM	A	22(7 × 30)	9	35	63	.280
9946	CM	A	22(7 × 30)	10	35	63	.300
9947	CM	A	22(7 × 30)	15	35	63	.335
9948	CM	A	22(7 × 30)	25	35	63	.410
9949	CM	A	22(7 × 30)	37	35	63	.460
9950	CM	A	22(7 × 30)	50	35	63	.555

S-R PVC MULTIPAIR OVERALL SHIELDED CABLES

Tinned copper, S-R PVC insulated, twisted pairs, with overall Beldfoil® shield plus tinned copper braid shield, chrome PVC jacket.



Belden Number	NEC Type	Fig.	Conductor(s) AWG/Strands	No. of Pairs	Nominal		Nom. O.D. (In.)
					Cap., [†] pF/Ft.	Cap., [‡] pF/Ft.	
8332	CM	B	24(7 × 32)	2	30	50	.250
8333	CM	B	24(7 × 32)	3	30	50	.265
8334	CM	B	24(7 × 32)	4	30	50	.288
8335	CM	B	24(7 × 32)	5	30	50	.295
8336	CM	B	24(7 × 32)	6	30	50	.311
8337	CM	B	24(7 × 32)	7	30	50	.311
8340	CM	B	24(7 × 32)	10	30	50	.385
8342	CM	B	24(7 × 32)	12§	30	50	.405
8345	CM	B	24(7 × 32)	15	30	50	.445
8348	CM	B	24(7 × 32)	18	30	50	.480
8355	CM	B	24(7 × 32)	25	30	50	.550

S-R PVC MULTIPAIR INDIVIDUALLY SHIELDED CABLES

8302	CM	B	22(7 × 30)	2	40	72	.282
8303	CM	B	22(7 × 30)	3	35	63	.296
8304	CM	B	22(7 × 30)	4	35	63	.320
8305	CM	B	22(7 × 30)	5	35	63	.322
8306	CM	B	22(7 × 30)	6	35	63	.348
8307	CM	B	22(7 × 30)	7	35	63	.348
8308	CM	B	22(7 × 30)	8	35	63	.384
8310	CM	B	22(7 × 30)	10	35	63	.440
8312	CM	B	22(7 × 30)	12§	35	63	.455
8315	CM	B	22(7 × 30)	15	35	63	.502
8318	CM	B	22(7 × 30)	18	35	63	.535
8325	CM	B	22(7 × 30)	25	35	63	.620

§ Plus extra single conductor. † Capacitance between conductors. ‡ Capacitance between one conductor and other conductors connected to shield.

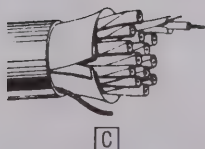
SCSI II (SMALL COMPUTER SYSTEM INTERFACE)

Tinned copper 28 AWG (7 × 36), polyethylene insulated, twisted pairs. Polypropylene buffer layer. Overall Beldfoil® aluminum-polyester shield. Overall tinned copper braid shield (85% coverage). Light gray PVC jacket.

Belden Number	NEC Type	Fig.	AWG Stranding	No. of Pairs	Nom. O.D. (In.)	Cap., pF/Ft.
1401A		B	28 (7 × 36)	25	.420	14.0
1402A		B	28 (7 × 36)	25	.395	14.0
1403A		B	28 (7 × 36)	34	.480	14.0

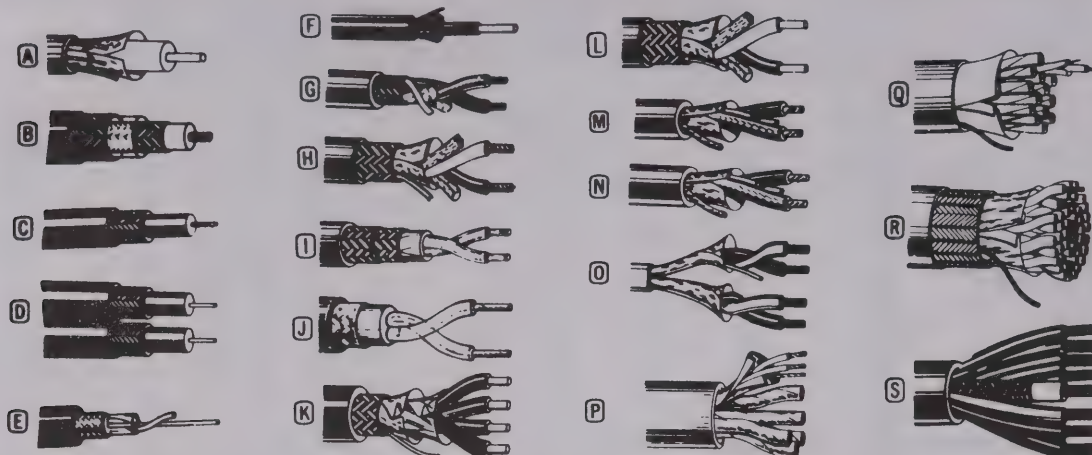
LOW CAPACITANCE CABLE FOR EIA RS-232 AND EIA RS-422 APPLICATIONS

Tinned copper, Datalene insulated, twisted pairs. Overall Beldfoil® aluminum-polyester shield. 24 AWG stranded tinned copper drain wire. Chrome PVC jacket.



1419A	.....	C	24 (7 × 32)	2	.270	12.5
1420A	.....	C	24 (7 × 32)	3	.285	12.5
1421A	.....	C	24 (7 × 32)	4	.290	12.5
1422A	.....	C	24 (7 × 32)	5	.320	12.5
1423A	.....	C	24 (7 × 32)	6	.350	12.5
1424A	.....	C	24 (7 × 32)	12½	.445	12.5
1425A	.....	C	24 (7 × 32)	15	.520	12.5

Not authorized at all locations. Please call for complete information.



Abbreviations used on this page: TC—tinned copper; BC—bare copper; BCS—bare copper-covered steel; CC—coated copper; SCS—silver-plated, copper-coated steel; D/D—Duofoil shield with drain wire(s); B/D—Beldfoil shield with drain wire(s); PVC—polyvinylchloride; PE—polyethylene.

COAXIAL COMPUTER CABLES

Belden Number	NEC Type	Fig.	MIL No. RG-	Nom. Imp., Ohms	Vel. of Prop., %	Nom. Cap., pF/ft.	Center Conductor		Shield	Jacket	
							Mat'l.	AWG Strands		Mat'l.	O.D. (In.)
9907	CL2	A	.....	50	80	25.4	BC	18 (Solid)	D/D•	PVC	.216
9688	MP/CM	B	8U	50	78	26	BC	11 (7 × 19)	BC•	PE	.480
9259	CMR	C	59U	75	78	17.3	BCS	22 (7 × 30)	BC	PVC	.242
9555	CL2	D	59U	75	66	20.5	BCS	23 (Solid)	BC	PVC	.242 × .485
9269	CL2	E	62AU	93	84	13.5	BCS	22 (Solid)	BC	PVC	.242
9268	CL2	E	62AU	93	84	13.5	BCS	22 (Solid)	BC	PVC	.260
9850	.....	B	216	75	66	20.5	TC	18 (7 × 26)	BC	PE	.285
9861	.....	B	212	50	66	30.8	SCS	15½ (Solid)	SCS	PE	.185
9862	CL2X	E	62	93	84	13.5	BCS	22 (Solid)	BC	PVC	.242
9228	.....	E	61	93	84	13.5	BCS	22 (Solid)	BC	PE	.242
9169	.....	E	71	93	84	13.5	BCS	22 (Solid)	TC•	PE	.245
8254	.....	E	62U	93	84	13.5	BCS	22 (Solid)	BC	PVC	.242
9393	.....	F	.....	93	78	14	CC	30 (Solid)	B/D	PVC	.100 × .115

• Has second shield of bare copper braid.

TWINAXIAL, 2 PAIR, AND 3 PAIR COMPUTER CABLES

Belden Number	NEC Type	Fig.	Nom. Imp., Ohms	Vel. of Prop., %	Nom. Cap., pF/ft.	Conductor(s)			Shield	Jacket	
						Mat'l.	AWG/Strands	No.		Mat'l.	O.D. (In.)
9272	CM	G	78	66	19.7	TC	20 (7 × 28)	2	TC	PVC	.242
9463	CM	H	78	66	19.7	TC	20 (7 × 28)	2	B/D#	PVC	.243
9250	.....	I	95	66	16	BC††	18 (7 × .0152")	2	TC#	PVC	.420
9207	CL2	J	100	66	15.5	**	20 (7 × 28)	2	TC	PVC	.330
9815	.....	J	100	66	15.5	**	20 (7 × 28)	2	TC	PE	.330
9855	CM	K	100	66	15.5	TC	22 (Solid)	4	B/D#	PVC	.315
9696	MP/CM	K	100	66	15.5	BC	22 (Solid)	4	B/D#	PVC	.296
9859	.....	J	108	66	19.7	TC**	20 (7 × 28)	2	TC	PE	.158
9860	CL2X	L	124	78	10.9	BC	16 (Solid)	2	D/D#	PVC	.440
9271	CM	M	124	66	40	TC	25 (7 × 33)	2	B/D	PVC	.242
9863	.....	M	124	66	40	TC	25 (7 × 33)	6	B/D	PVC	.430
9182	CL2X	M	150	78	28.9	TC	22 (19 × 34)	2	D/D	PVC	.350
9851	.....	M	200	76	22	SCS	29 (Solid)	2	B/D	PVC	.245

Also has second tinned copper braid shield. †† One conductor has tinned center strand. ** One tinned and one bare conductor. ‡ Over each pair.

SPECIAL PURPOSE COMPUTER CABLES

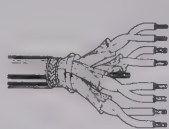
Belden Number	NEC Type	Fig.	Imp., Ohms	Prop., %	Cap., pF/ft.	Conductor(s)			Jacket	
						Mat'l.	AWG/Strands	No.	Mat'l.	O.D. (In.)
1268A	CM	K	100	66	.....	TC	22 (Solid)	4	PVC	.315
9414	CM	N	.....	.....	50	TC	22 (7 × 30)	2	PVC	.180
9406	CM	O	.....	.....	50	TC	22 (7 × 30)	4	PVC	.175 × .280
9990	CM	P	60	66	25	TC	24 (7 × 32)	6	PVC	.276
9991	CM	P	60	66	25	TC	24 (7 × 32)	12	PVC	.355
9868	CM	Q	65	78	.....	TC	28 (7 × 36)	14	PVC	.394
9641	CM	R	.....	.....	38	TC	26 (7 × 34)	12	PVC	.350
			.....	.....	35	TC	26 (7 × 34)	10		
			.....	.....	.....	TC	24 (7 × 32)	1		
9681	CM	S	.....	.....	.....	TC	26 (7 × 34)	7	PVC	.....
			75	78	17.5	BC	22 (Solid)	1*		

* Coaxial.

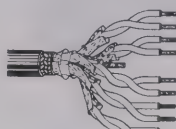
Not authorized at all locations. Please call for complete information.

LOCAL AREA NETWORK CABLES

Abbreviations used: BC—bare copper; TC—tinned copper; FEP—fluorinated ethylene propylene (Teflon®); TFE—tetrafluoroethylene tape (Teflon®); PVC—polyvinylchloride plastic; FBG—fiberglass; PE—polyethylene plastic; FA—Flamarrest™; FC—Fluorocopolymer.



A



B



C

TRANSCEIVER CABLES

Mfr. Number	NEC Type	Fig.	Nom. Imp., Ohms.	Vel. of Prop. %	Nom. Cap. pF/Ft.	Conductor(s)		No. of Pairs	Jacket	
						Mat'l.*	AWG Strands		Mat'l.*	O.D. (In.)
9901	CL2	A	78	78	16.7	TC	20 (7 × 28)	4	PVC	.420
89901	CMP	A	78	78	17.5	TC	20 (7 × 28)	4	PVDF	.372
9902	CL2	B	78	78	16.7	TC	20 (7 × 28)	5	PVC	.518
9903	CL2	B	78	78	16.7	TC	28 (7 × 36)	4	PVC	.260



D



E



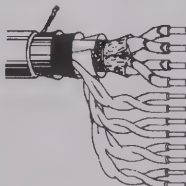
F

TRUNK/TRANSCIEVER COAXIAL CABLE

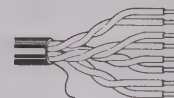
Mfr. Number	NEC Type	Fig.	Nom. Imp., Ohms.	Vel. of Prop. %	Nom. Cap. pF/Ft.	Conductor(s)		Jacket	O.D. (In.)
						Mat'l.*	AWG Strands		
1223A	CL2	D	75	83	16.3	†	18 (Solid)	PVC	.290
1224A	CL2	D	75	83	16.3	†	14 (Solid)	PVC	.410
1152A	CMP	E	75	84	16.5	TC	18 (Solid)	TFE	.274
1153A	CL2P	E	75	84	16.5	TC	14 (Solid)	TFE	.387
9907	CL2	F	50	80	25.4	TC	20 (19 × 32)	PVC	.182
82407	CL2P	F	50	80	25.4	TC	20 (19 × 32)	FA	.165
89907	CL2P	F	50	80	25.4	TC	20 (19 × 32)	FC	.165



G



H



I



J



K



L

PLENUM AND NON-PLENUM COMPUTER (CABLE)

Mfr. Number	NEC Type	Fig.	Nom. Imp., Ohms.	Vel. of Prop. %	Nom. Cap. pF/Ft.	Conductor(s)		No. of Pairs	Jacket	
						Mat'l.*	AWG Strands		Mat'l.*	O.D. (In.)
9688	MP/CM	G	150	78	8.5	TC	22 (Solid)	2	FEP	.310 × .445
82688	MPP/CMP	G	150	78	8.5	TC	22 (Solid)	2	FEP PVC	.260 × .360
89688•	MPP/CMP	G	150	78	8.5	TC	22 (Solid)	2	FEP	.250 × .350
9689	MP/CM	H	150	78	8.5	TC	22 (Solid)	6	FEP PVC	.500
82689	MPP/CMP	H	150	78	8.5	TC	22 (Solid)	6	FEP PVC	.452
89689•	MPP/CMP	H	150	78	8.5	TC	22 (Solid)	6	FEP PVC	.422
1154A	MP/CM	I	105	60	15.0	BC	24 (Solid)	4	PVC	.185
1155A•	MPP/CMP	I	105	62	15.0	BC	24 (Solid)	4	PVC	.140
1215A	CL2	J	150	78	8.5	TC	26 (7 × 34)	2	PVC	.340
1156A•	CMP	K	150	80	8.5	TC	26 (7 × 34)	2	PVDF	.312 × .202
9999	CM	L	78	66	19.7	TC	22 (7 × 30)	1	PVC	.180
89999	CMP	L	78	69	18.9	TC	22 (7 × 30)	1	FEP	.178

®Teflon is a registered trademark of E.I. Du Pont. * See list of abbreviations at top of page. # per 1000 feet. †Plus second SCC shield. §Suitable for direct burial. • Plenum Version.

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UNSHIELDED TWISTED PAIR DATA CABLES



U.L. Article 800

A



U.L. Article 800

B

24 GAUGE, S-R PVC INSULATED/PVC JACKET

Unshielded twisted pairs, 24 AWG solid bare copper, S-R PVC insulation, PVC jacket.

Belden Number	NEC Type	Fig.	AWG (Strands)	No. of Pairs	Nominal			
					O.D. (In.)	D.C.R. Cond. (Ohms)	Imp. (Ohms)	Cap. pF/Ft.
1227A	CM	A	24 (Solid)	2	.120	26	600	17.5
1228A	MP/CM	A	24 (Solid)	3	.150	26	600	17.5
1229A	MPR/CMR	A	24 (Solid)	4	.190	26	600	17.5
1230A	MPR/CMR	A	24 (Solid)	6	.230	26	600	17.5
1231A	MPR/CMR	A	24 (Solid)	12	.300	26	600	18.8
1232A	MPR/CMR	A	24 (Solid)	25	.380	26	600	18.8

22 GAUGE, 4/C POLYETHYLENE INSULATED/PVC JACKET

Unshielded four-conductor, 24 AWG solid bare copper. Polyethylene insulation, PVC jacket.

Belden Number	NEC Type	Fig.	AWG (Strands)	No. of Pairs	Nominal			
					O.D. (In.)	D.C.R. Cond. (Ohms)	Imp. (Ohms)	Cap. pF/Ft.
1242A	CMX	B	22 (Solid)	4/C	.140	16	.....	18.5

24 GAUGE, S-R PVC INSULATED/PVDF JACKET

Unshielded twisted pairs, 24 AWG solid bare copper, S-R PVC insulation, PVDF jacket.

Belden Number	NEC Type	Fig.	AWG (Strands)	No. of Pairs	Nominal			
					O.D. (In.)	D.C.R. Cond. (Ohms)	Imp. (Ohms)	Cap. pF/Ft.
1243A	CMP	A	24 (Solid)	2	.110	26	600	18.5
1244A	MPP/CMP	A	24 (Solid)	3	.130	26	600	18.5

24 GAUGE, S-R PVC INSULATED/PVDF JACKET

Unshielded twisted pairs, 24 AWG solid bare copper, S-R-PVC insulation, PVDF jacket.

Belden Number	NEC Type	Fig.	AWG (Strands)	No. of Pairs	Nominal			
					O.D. (In.)	D.C.R. Cond. (Ohms)	Imp. (Ohms)	Cap. pF/Ft.
1245A	MPP/CMP	A	24 (Solid)	4	.150	26	600	18.5
1246A	MPP/CMP	A	24 (Solid)	6	.190	26	600	18.5
1247A	MPP/CMP	A	24 (Solid)	25	.340	26	600	19.2

24 GAUGE, HALAR*/PVDF JACKET

Unshielded twisted pairs, 24 AWG solid bare copper, Halar insulation, PVDF jacket.

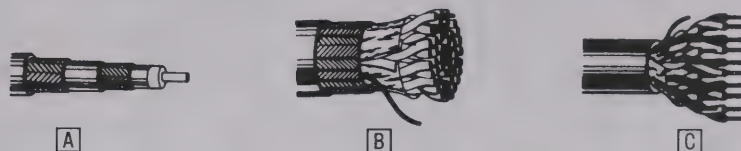
Belden Number	NEC Type	Fig.	AWG (Strands)	No. of Pairs	Nominal			
					O.D. (In.)	D.C.R. Cond. (Ohms)	Imp. (Ohms)	Cap. pF/Ft.
1248A	CMP	A	24 (Solid)	2	.120	26	600	16.2
1249A	MPP/CMP	A	24 (Solid)	3	.130	26	600	16.2
1250A	MPP/CMP	A	24 (Solid)	4	.150	26	600	16.2
1251A	MPP/CMP	A	24 (Solid)	6	.160	26	600	16.2
1252A	MPP/CMP	A	24 (Solid)	12	.220	26	550	18.0
1253A	MPP/CMP	A	24 (Solid)	25	.300	26	550	18.0

*Ausimont Corp. trademark

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TRUNK COAXIAL CABLES



Belden Number	NEC Type	Fig.	Nom. Imp., Ohms	Vel. of Prop. %	Nom. Cap., pF Ft.	Center Conductor		Shield	Jacket	
						Mat'l	AWG Strands		Mat'l	O.D. (In.)
9880	CL2	A	50	78	26	TC	0855" (Solid)	§	PVC	.405

§ Aluminum-polyester shield bonded to dielectric plus tinned copper braid plus Duofoil plus tinned copper braid.

MULTIPAIR OVERALL SHIELDED CABLES SUITABLE FOR RS-422 TYPE APPLICATIONS

Type 9804 thru 9814: Tinned copper, polypropylene insulated, overall Beldfoil® braid shield and drain wire, chrome PVC jacket. **Types 9829 thru 9844:** Tinned copper, polyethylene insulated, twisted pairs, overall Beldfoil braid shield with drain wire, chrome PVC jacket.

Belden Number	NEC Type	Fig.	Nom. Imp., Ohms	Vel. of Prop. %	Nominal		Conductor(s) AWG Strands	No. of Conds.	Nom. O.D. (In.)
					Cap.† pF Ft.	Cap.‡ pF Ft.			
9804	CL2	B	100	66	15.5	27.5	28 (7 × 36)	2	.220
9805	CL2	B	100	66	15.5	27.5	28 (7 × 36)	3	.230
9806	CL2	B	100	66	15.5	27.5	28 (7 × 36)	4	.240
9807	CL2	B	100	66	15.5	27.5	28 (7 × 36)	5	.250
9808	CL2	B	100	66	15.5	27.5	28 (7 × 36)	7	.265
9809	CL2	B	100	66	15.5	27.5	28 (7 × 36)	9	.300
9812	CL2	B	100	66	15.5	27.5	28 (7 × 36)	12	.330
9813	CL2	B	100	66	15.5	27.5	28 (7 × 36)	13	.340
9819	CL2	B	100	66	15.5	27.5	28 (7 × 36)	18	.375
9825	CL2	B	100	66	15.5	27.5	28 (7 × 36)	25	.430
9814	CL2	B	100	66	15.5	27.5	28 (7 × 36)	31	.475
9829	CM	B	100	66	15.5	27.5	24 (7 × 32)	2	.300
9830	CM	B	100	66	15.5	27.5	24 (7 × 32)	3	.310
9831	CM	B	100	66	15.5	27.5	24 (7 × 32)	4	.330
9832	CM	B	100	66	15.5	27.5	24 (7 × 32)	5	.350
9839	CM	B	100	66	15.5	27.5	24 (7 × 32)	6	.370
9833	CM	B	100	66	15.5	27.5	24 (7 × 32)	7	.370
9834	CM	B	100	66	15.5	27.5	24 (7 × 32)	9	.420
9835	CM	B	100	66	15.5	27.5	24 (7 × 32)	10	.450
9836	CM	B	100	66	15.5	27.5	24 (7 × 32)	12	.470
9837	CM	B	100	66	15.5	27.5	24 (7 × 32)	18	.570
9838	CM	B	100	66	15.5	27.5	24 (7 × 32)	25	.660
9841	CM	B	100	66	12.8	23	24 (7 × 32)	1	.270
9842	CM	B	100	66	12.8	23	24 (7 × 32)	2	.355
9843	CM	B	100	66	12.8	23	24 (7 × 32)	3	.370
9844	CM	B	100	66	12.8	23	24 (7 × 32)	4	.395

MULTIPAIR OVERALL FOIL SHIELDED CABLES

Tinned copper, PVC insulated, twisted pairs, overall Beldfoil® foil shield with drain wire, chrome PVC jacket.

9501	CM	C	45	55	41	50	24 (7 × 32)	1	.156
9502	CM	C	45	55	30	50	24 (7 × 32)	2	.222
9503	CM	C	45	55	30	50	24 (7 × 32)	3	.232
9504	CM	C	45	55	30	50	24 (7 × 32)	4	.265
9505	CM	C	45	55	30	50	24 (7 × 32)	5	.295
9506	CM	C	45	55	30	50	24 (7 × 32)	6	.295
9507	CM	C	45	55	30	50	24 (7 × 32)	7	.300
9508	CM	C	45	55	30	50	24 (7 × 32)	8	.330
9509	CM	C	45	55	30	50	24 (7 × 32)	9	.340
9510	CM	C	45	55	30	50	24 (7 × 32)	10	.380
9515	CM	C	45	55	30	50	24 (7 × 32)	15	.425
9519	CM	C	45	55	30	50	24 (7 × 32)	19	.460
9525	CM	C	45	55	30	.....	24 (7 × 32)	25	.515
9550	CM	C	45	55	30	.....	24 (7 × 32)	50	.700

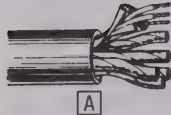
† Capacitance between conductors. ‡ Capacitance between one conductor and other conductors connected to shield.

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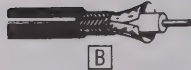
COMPUTER CABLES

Belden Number	NEC Type	Fig.	Nom. Imp., Ohms	Vel. of Prop., %	Nominal		Conductors AWG/Strands	No. of Pairs	Nom. O.D. (In.)
					Cap., [†] pF/Ft.	Capl., [‡] pF/Ft.			
9990	CM	A	60	66	25	47	24 (7 × 32)	3	.248
9991	CM	A	60	66	25	47	24 (7 × 32)	6	.327
9992	CM	A	60	66	25	47	24 (7 × 32)	9	.368
9993	CM	A	60	66	25	47	24 (7 × 32)	12	.413
9995	CM	A	60	66	25	47	24 (7 × 32)	25	.614



COMPUTER CABLES FOR EIA RS-422 AND CAD/CAM APPLICATIONS

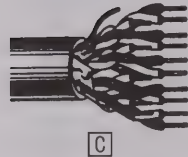
8162	CM	A	100	78	13	22	24 (7 × 32)	2	.376
8163	CM	A	100	78	13	22	24 (7 × 32)	3	.376
8164	CM	A	100	78	13	22	24 (7 × 32)	4	.430
8165	CM	A	100	78	13	22	24 (7 × 32)	5	.460
8166	CM	A	100	78	13	22	24 (7 × 32)	6	.496
8167	CM	A	100	78	13	22	24 (7 × 32)	7	.496
8168	CM	A	100	78	13	22	24 (7 × 32)	8	.575
8170	CM	A	100	78	13	22	24 (7 × 32)	10	.650
8175	CM	A	100	78	13	22	24 (7 × 32)	15	.720
8178	CM	A	100	78	13	22	24 (7 × 32)	18	.770
8185	CM	A	100	78	13	22	24 (7 × 32)	25	.935



FLUOROCOPOLYMER JACKETED COMPUTER AND INSTRUMENTATION CABLES

Teflon® insulation and black fluorocopolymer jacket.

Belden Number	NEC Type	Fig.	MIL No. RG-	Vel. of Prop., %	Nom. Cap. pF/Ft.	Center Conductors		Shield	Nom. O.D. (In.)
						Mat'l.	AWG/Strands		
87120	CMP	B	6 U	78	17	BCS	18 (Solid)	D [†]	.180
87292	CL2P	B	11 U	80	16	BC	14 (Solid)	D [†]	.285



*BCS = Bare, copper-covered steel; BC = Bare copper; D = Duofoil shield; † Plus tinned copper braid.

LOW CAPACITANCE COMPUTER CABLES FOR EIA RS-232 APPLICATIONS

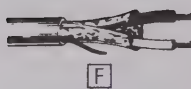
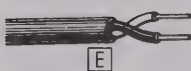
Belden Number	NEC Type	Fig.	Nom. Imp., Ohms	Vel. of Prop., %	Nominal		Conductors AWG/Strands	No. of Pairs	Nom. O.D. (In.)
					Cap., [†] pF/Ft.	Capl., [‡] pF/Ft.			
9680	CM	C	100	66	15.5	27.5	24 (7 × 32)	3	.285
9681	CM	C	100	66	15.5	27.5	24 (7 × 32)	4	.310
9682	CM	C	100	66	15.5	27.5	24 (7 × 32)	6	.350
9683	CM	C	100	66	15.5	27.5	24 (7 × 32)	9	.395
9684	CM	C	100	66	15.5	27.5	24 (7 × 32)	12½	.460



†Capacitance between conductors. ‡Capacitance between one conductor and other conductors connected to shield.

POWER LIMITED 105°C/300V FIRE PROTECTIVE SIGNALING CIRCUIT CABLES

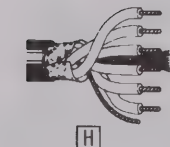
Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Conds.	Insul. Thckns. (In.)	Jacket Thckns. (In.)	Nom. O.D. (In.)
9578	MPR/CMR	D	18 (Solid)	4	.017	.037	.263
9572	MPR/CMR	E	16 (Solid)	4	.017	.037	.250
9575	MPR/CMR	F	16 (Solid)	2	.017	.037	.254
9579	MPR/CMR	D	16 (Solid)	4	.017	.037	.301
9580	FPLR	E	14 (Solid)	2	.022	.042	.312
9581	FPLR	F	14 (Solid)	2	.022	.042	.316
9582	FPLR	E	12 (Solid)	2	.022	.042	.346
9583	FPLR	F	12 (Solid)	2	.022	.042	.350



SHIELDED DATA CABLES FOR MOLEX SEMMCONN™ & AMP SDL™ CONNECTORS

These round shielded data cables are UL 2464 rated (300V, 80°C) and UL VW-1 flame tested.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Conds.	Insul. Thckns. (In.)	Jacket Thckns. (In.)	Nom. O.D. (In.)
1211A	CL2X	H	26 (7 × 34)	4	.048	.035	.193 × .148
1212A	CL2X	H	26 (7 × 34)	6	.048	.035	.217 × .278
1213A	CL2X	H	26 (7 × 34)	8	.048	.035	.234 × .328
1214A	CL2X	H	26 (7 × 34)	10	.048	.035	.301 × .400



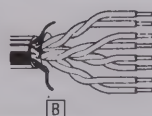
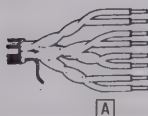
DUPLEX PRIMARY WIRE

Bare copper, PVC insulated, conductors parallel, chrome PVC jacket.

Belden Number	Fig.	AWG and Stranding	No. of Conds.	Insul. Thckns. (In.)	Jacket Thckns. (In.)	Nom. O.D. (In.)
8677	G	16 (19 × 29)	2	.023	.022	.146 × .148
8675	G	14 (19 × 27)	2	.023	.022	.161 × .278
8673	G	12 (19 × 25)	2	.026	.022	.186 × .328
8678	G	10 (19 × 23)	2	.031	.025	.225 × .400

Not authorized at all locations. Please call for complete information.

HIGH PERFORMANCE TWISTED PAIR DATA CABLES



- Meets/exceeds EIA/TIA 568 Commercial Building Wiring Standard
- Meets/exceeds IEEE 802.3 10 Base T
- Supports all LAN topologies including Star, Bus, Ring, and Tree
- Supports mini and mainframe applications
- U.L. CM, CMP; C.S.A. PCC FT1, FT4, FT6 rated
- Flexible Flammarrest® jacket available in plenum versions

Belden Number	No. of Pairs	NEC Type	C.S.A. Cert.	Conductors AWG (Strands)	Insul. Thckns (In.)	Jacket Thckns (In.)	Nominal		
							O.D. (In.)	IMP (Ohms)	Cap. P/ft.

UNSHIELDED PVC JACKETED CABLE (Fig. A)

24 AWG solid bare copper, polyolefin insulated, twisted pairs, unshielded, nylon ripcord, gray or blue PVC jacket.

1596A	2	CH	FT4	24 (Solid)	.007	.015	.160	100	14
1455A	4	CM	FT4	24 (Solid)	.007	.015	.186	100	14
1571A	8	CM	FT1	24 (Solid)	.007	.015	.233	100	14
1575A	12	CM	FT1	24 (Solid)	.007	.015	.285	100	15
1579A	25	CM	FT1	24 (Solid)	.007	.022	.422	100	15

SHIELDED PVC JACKETED CABLE (Fig. B)

24 AWG solid bare copper, polyolefin insulated, twisted pairs. Overall Beldfoil® shield with drain wire, nylon ripcord, gray or blue PVC jacket.

1597A	2	CM	FT1	24 (Solid)	.012	.015	.201	100	16
1456A	4	CM	FT1	24 (Solid)	.012	.015	.231	100	16
1572A	8	CM	FT1	24 (Solid)	.012	.015	.283	100	16
1576A	12	CM	FT1	24 (Solid)	.012	.015	.346	100	17
1580A	25	CM	FT1	24 (Solid)	.012	.022	.603	100	17

UNSHIELDED PLENUM JACKETED CABLE (Fig. A)

24 AWG solid bare copper, FEP Teflon® insulated, twisted pairs, unshielded, nylon ripcord, gray or blue Flammarrest® or fluorocopolymer jacket.

1598A	2	CMP	FT4/6	24 (Solid)	.006	.015*	.149	100	14
1457A	4	CMP	FT4/6	24 (Solid)	.006	.015*	.173	100	14
1573A	8	CMP	FT4/6	24 (Solid)	.007	.015*	.222	100	14
1577A	12	CMP	FT4/6	24 (Solid)	.007	.015*	.271	100	15
1581A	25	CMP	FT4/6	24 (Solid)	.007	.015†	.387	100	15

SHIELDED PLENUM JACKETED CABLE (Fig. B)

24 AWG solid bare copper, FEP Teflon® insulated, twisted pairs. Overall Beldfoil® shield with drain wire, nylon ripcord, gray or blue Flammarrest® or fluorocopolymer jacket.

1599A	2	CMP	FT4/6	24 (Solid)	.010	.015*	.187	100	16
1458A	4	CMP	FT4/6	24 (Solid)	.010	.015*	.217	100	16
1574A	8	CMP	FT4/6	24 (Solid)	.010	.015*	.258	100	16
1578A	12	CMP	FT4/6	24 (Solid)	.010	.012†	.315	100	17
1582A	25	CMP	FT4/6	24 (Solid)	.010	.015†	.458	100	17

UNSHIELDED PVC JACKETED CABLE (Fig. A)

22 AWG solid bare copper, polyolefin insulated, twisted pairs, unshielded, nylon ripcord, gray or blue PVC jacket.

1555A	4	CM	FT4	22 (Solid)	.010	.015	.234	100	15
1559A	8	CM	FT1	22 (Solid)	.011	.015	.299	100	15
1563A	12	CM	FT1	22 (Solid)	.011	.015	.368	100	16
1567A	25	CM	FT1	22 (Solid)	.011	.022	.544	100	16

SHIELDED PVC JACKETED CABLE (Fig. B)

22 AWG solid bare copper, polyolefin insulated, twisted pairs. Overall Beldfoil® shield with drain wire, nylon ripcord, gray or blue PVC jacket.

1556A	4	CM	FT1	22 (Solid)	.015	.015	.286	100	16
1560A	8	CM	FT1	22 (Solid)	.015	.015	.352	100	16
1564A	12	CM	FT1	22 (Solid)	.015	.022	.446	100	16
1568A	25	CM	FT1	22 (Solid)	.015	.022	.635	100	16

UNSHIELDED PLENUM JACKETED CABLE (Fig. A)

22 AWG solid bare copper, FEP Teflon® insulated, twisted pairs, unshielded, nylon ripcord, gray or blue Flammarrest® or fluorocopolymer jacket.

1557A	4	CMP	FT4/6	22 (Solid)	.009	.015*	.225	100	15
1561A	8	CMP	FT4/6	22 (Solid)	.010	.012A	.282	100	15
1565A	12	CMP	FT4/6	22 (Solid)	.010	.012†	.348	100	16
1569A	25	CMP	FT4/6	22 (Solid)	.010	.015†	.510	100	16

SHIELDED PLENUM JACKETED CABLE (Fig. B)

22 AWG solid bare copper, FEP Teflon® insulated, twisted pairs. Overall Beldfoil® shield with drain wire, nylon ripcord, gray or blue Flammarrest® or fluorocopolymer jacket.

1558A	4	CMP	FT4/6	22 (Solid)	.013	.015*	.269	100	16
1562A	8	CMP	FT4/6	22 (Solid)	.013	.012†	.324	100	16
1566A	12	CMP	FT4/6	22 (Solid)	.013	.015†	.404	100	16
1570A	25	CMP	FT4/6	22 (Solid)	.013	.015†	.580	100	16

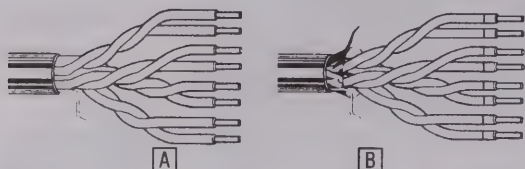
*Flammarrest †Fluorocopolymer

DATATWIST™ COLOR CODE CHART (MODIFIED WESTERN ELECTRIC)

Pair No.	Color Combination	Pair No.	Color Combination	Pair No.	Color Combination	Pair No.	Color Combination	Pair No.	Color Combination
1	White/Blue Stripe	6	Red/Blue Stripe	11	Black/Blue Stripe	16	Yellow/Blue Stripe	21	Purple/Blue Stripe
2	White/Orange Stripe	7	Red/Orange Stripe	12	Black/Orange Stripe	17	Yellow/Orange Stripe	22	Purple/Orange Stripe
3	White/Green Stripe	8	Red/Green Stripe	13	Black/Green Stripe	18	Yellow/Green Stripe	23	Purple/Green Stripe
4	White/Brown Stripe	9	Red/Brown Stripe	14	Black/Brown Stripe	19	Yellow/Brown Stripe	24	Purple/Brown Stripe
5	White/Gray Stripe	10	Red/Gray Stripe	15	Black/Gray Stripe	20	Yellow/Gray Stripe	25	Purple/Gray Stripe
	Gray/White Stripe		Gray/Red Stripe		Gray/Black Stripe		Gray/Yellow Stripe		Gray/Purple Stripe

Not authorized at all locations. Please call for complete information.

HIGH PERFORMANCE TWISTED PAIR DATA CABLES



- Suitable for IEEE 802.3 10 Base and IEEE 802.5
- NEC CM rated
- CSA PCC FT1, FT4, FT6 rated
- Flexible Flammarrest® jacket available on plenum versions

Mfr. No.	No. of Pairs	NEC Type	CSA Cert.	Conductors AWG (Strands)	Nominal		
					O.D. (In.)	Imp. (Ohms)	Cap. (pF/Ft.)

UNSHIELDED PVC JACKETED (FIG. A)

24 AWG bare copper, polyolefin insulated. Light gray or blue PVC jacket with ripcord.

1588A	2	CM	PCC FT4	24 (Solid)	.185	100	14
1583A	4	CM	PCC FT4	24 (Solid)	.217	100	14

SHIELDED PVC JACKETED (FIG. B)

24 AWG bare copper, step* polyolefin insulated. Light gray or blue PVC jacket with ripcord. Overall Beldfoil® shield with drain wire.

1589A	2	CM	PCC FT1	24 (Solid)	.208	100	15
1584A	4	CM	PCC FT1	24 (Solid)	.250	100	15
1633A	4	CM	PCC FT1	24 (Solid)	.250	100	15

UNSHIELDED PLENUM JACKETED (FIG. A)

24 AWG bare copper, FEP insulated. Natural or blue Flammarrest® jacket with ripcord.

1590A	2	CMP	PCC FT4/6	24 (Solid)	.170	100	14
1585A	4	CMP	PCC FT4/6	24 (Solid)	.200	100	14

SHIELDED PLENUM JACKETED (FIG. B)

24 AWG bare copper, step* FEP insulated. Natural or blue Flammarrest® jacket with ripcord. Overall Beldfoil® shield with drain wire.

1591A	2	CMP	PCC FT4/6	24 (Solid)	.203	100	15
1586A	4	CMP	PCC FT4/6	24 (Solid)	.245	100	15

*Patent pending.

DATATWIST™ COLOR CODE CHART (MODIFIED WESTERN ELECTRIC)

Pair No.	Color Combination	Pair No.	Color Combination	Pair No.	Color Combination	Pair No.	Color Combination	Pair No.	Color Combination
1	White/Blue Stripe Blue	6	Red/Blue Stripe Blue/Red Stripe	11	Black/Blue Stripe Blue/Black Stripe	16	Yellow/Blue Stripe Blue/Yellow Stripe	21	Purple/Blue Stripe Blue/Purple Stripe
2	White/Orange Stripe Orange	7	Red/Orange Stripe Orange/Red Stripe	12	Black/Orange Stripe Orange/Black Stripe	17	Yellow/Orange Stripe Orange/Yellow Stripe	22	Purple/Orange Stripe Orange/Purple Stripe
3	White/Green Stripe Green	8	Red/Green Stripe Green/Red Stripe	13	Black/Green Stripe Green/Black Stripe	18	Yellow/Green Stripe Green/Yellow Stripe	23	Purple/Green Stripe Green/Purple Stripe
4	White/Brown Stripe Brown	9	Red/Brown Stripe Brown/Red Stripe	14	Black/Brown Stripe Brown/Black Stripe	19	Yellow/Brown Stripe Brown/Yellow Stripe	24	Purple/Brown Stripe Brown/Purple Stripe
5	White/Gray Stripe Gray/White Stripe	10	Red/Gray Stripe Gray/Red Stripe	15	Black/Gray Stripe Gray/Black Stripe	20	Yellow/Gray Stripe Gray/Yellow Stripe	25	Purple/Gray Stripe Gray/Purple Stripe

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complete information.**

Local Area Network Cables

IEEE 802.3 10Base2, Thinnet, Coaxial Trunk Cable



Part No.	AWG	No. Cond.	Diameter	Lbs/Kft	Jacket
650075	24	1	.183	22	Gray PVC
640114	24	1	.161	22	Gray Tek-Flex
640143	20	1	.161	22	Polymer Alloy

Enhanced IBM Cabling System



Token Ring, IBM Part Number 33G8220 Enhanced Specifications, 100 Mbps

Type 1A Media, ETL Verified to IBM Specifications, Plenum

Part No.	AWG	No. Pairs	Diameter	Lbs/Kft	Jacket
340032	22	2	.394	42	Polymer Alloy

Token Ring, IBM Part Number 33G8221 Enhanced Specifications, 100 Mbps

Type 2A Media, ETL Verified to IBM Specifications, Plenum

Part No.	AWG	No. Pairs	Diameter	Lbs/Kft	Jacket
340033	22	2 DGM 4 VGM	.400	74	Polymer Alloy

Token Ring, IBM Part Number 33G2772 Enhanced Specifications, 100 Mbps

Type 1A Media, ETL Verified to IBM Specifications, General Purpose

Part No.	AWG	No. Pairs	Diameter	Lbs/Kft	Jacket
330032	22	2	.424"x.264"	52	Flame Retardant PVC

Token Ring, IBM Part Number 33G2775 Enhanced Specifications, 100 Mbps

Type 6A Media, ETL Verified to IBM Specifications, General Purpose

Part No.	AWG	No. Pairs	Diameter	Lbs/Kft	Jacket
330012	26	2	.345	44	Flame Retardant PVC

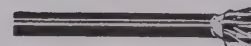
Token Ring, IBM Enhanced Specifications, 100 Mbps

Type 9A Media, ETL Verified to IBM Specifications, General Purpose

Part No.	AWG	Diameter	IBM P/N	Rating
330034	26	.260	33G8224	General Purpose
330014	26	.260	33G2776	Riser
340034	26	.180	33G8223	Plenum

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Berk-Tek produces five Grades of UTP corresponding to EIA/TIA 568 Standard UTP Horizontal Media Cable Categories 1 through 5. Berk-Tek UTP Cables are guaranteed to meet specifications covering EIA/TIA and NEMA UTP requirements and are qualified by UL and ETL.



Hyper Grade, Extended Distance/Extended Frequency, 100 Mbps Category 5, 24 AWG, Unshielded Twisted Pairs

Part No.	No. of Pairs	AWG	Diameter	Lbs/Kft	Type	Jacket
230247	4	24	.145	18	CMP	Fluoropolymer
230291	25	24	.375	105	CMP	Fluoropolymer
230292	4	24	.160	21	CMP	Polymer Alloy
530123	4	24	.190	21	CMR	PVC
210330 (Patch Cable)	4	24(7)	.220	23	CMR	PVC

Category 5, 24 AWG, Shielded Twisted Pairs

Part No.	No. of Pairs	AWG	Diameter	Lbs/Kft	Type	Jacket
230251	4	24	.210	26	CMP	Polymer Alloy

Super Grade, Extended Distance/Data Rate, IEEE 802.5, Token Ring, 16 & 20 Mbps Category 4, 24 AWG, Unshielded Twisted Pair

Part No.	No. of Pairs	AWG	Diameter	Lbs/Kft	Type	Jacket
230106	4	24	.160	21	CMP	Polymer Alloy

LAN Grade, IEEE 802.3, 10BASET, EIA/TIA-568, 10 & 16 Mbps Category 3, 24 AWG, Unshielded Twisted Pairs

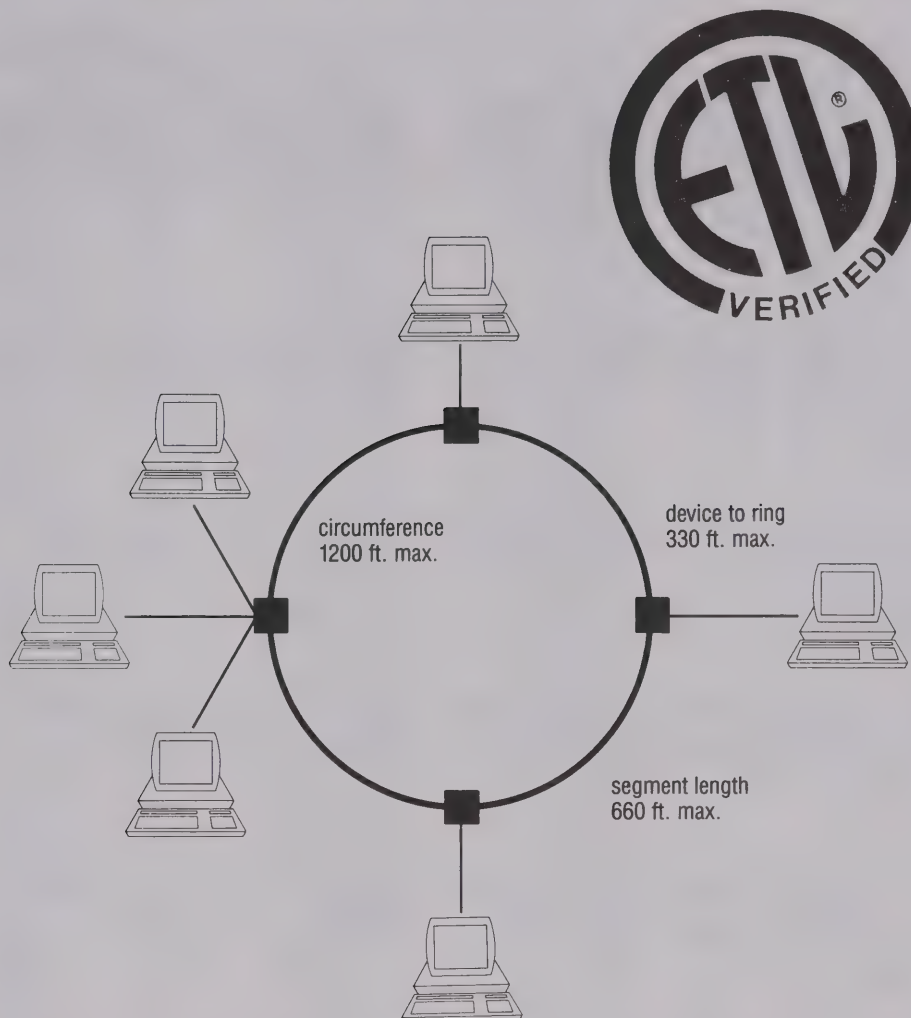
Part No.	No. of Pairs	AWG	Diameter	Lbs/Kft	Type	Jacket
230146	4	24	.150	17	CMP	Polymer Alloy
230274	25	4	.320	90	CMP	Polymer Alloy

Parallel Hybrid Cables; Hyper Grade Category 5, 24 AWG, Unshielded Twisted Pairs

Part No.	Component 1	Component 2	Lbs/Kft	Jacket
230316	CAT 5 UTP	CAT 5 UTP	37	Polymer Alloy

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Recommended IBM*Token Ring Cables (IEEE 802.5)



Comm/Scope IBM token ring cables have been verified for use with IBM systems by ETL.

Comm/Scope IBM token ring cables

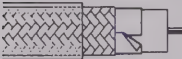
- #4901 Type 1 plenum or
- #9901 Type 1 nonplenum (data only)
- #4902 Type 2 plenum or
- #9902 Type 1 nonplenum (data & voice)
- #4903 Type 3 plenum (voice only)
- #4909 Type 9 plenum (short run only)

NOTE: The dimensions and statistics given here are for reference only and may vary depending upon your particular application.

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EXPERTS ON ALL YOUR SPECIAL
EQUIPMENT OR COMPONENT NEEDS.**

Recommended Cables for Broadband Networks (IEEE 802.7)

PRODUCT DESCRIPTION QUALIFICATIONS	PART NUMBER	CENTER CONDUCTOR AWG OR DIA. IN IN. WIRE TYPE NOM DCR OHMS/1000'	DIELECTRIC NOM O.D. IN INCHES	SHIELD CONSTRUCTION NOM DCR OHMS/1000'	JACKET & NOM O.D. IN INCHES	NOM CAP. P/Ft	NOM VEL. OF PROP.	NOM IMP. (OHMS)	NOMINAL ATTENUATION MHz db/100'	
.625 PLENUM TRUNK 	2315	.137 Solid CCAL 0.56	FFEP .563	ALS .625 0.23	N/A	16.4	86%	75	5	0.10
									50	0.43
									100	0.68
									200	1.08
									300	1.44
									450	1.96
CL2P & CATVP										
RG11 MATV 	2285 2285K	14 Solid CCS 6.4	FFEP .280	FOIL + 60% AL 7.1	FEP or KYNAR .351	16.0	84%	75	5	0.34
									55	1.06
									83	1.31
									211	2.19
									300	2.68
									400	3.24
CL2P & CATVP										
RG 11 MATV 	5913	14 Solid CCS 14.29	FP .280	FOIL + 60% AL 7.1	PVC .405	16.2	82%	75	5	.35
									50	.94
									100	1.28
									200	1.78
									300	2.20
									400	2.57
CL2										
RG6 MATV 	2275 2275K	18 Solid CCS 16.3	FFEP .180	FOIL + 60% AL 9.0	FEP or KYNAR .251	15.8	84%	75	5	0.53
									50	1.50
									100	2.06
									200	2.97
									300	3.77
									400	4.52
CL2P & CATVP										
RG6 MATV 	5728	18 Solid CCS 35.5	FP .180	FOIL + 60% AL 9.0	PVC .272	16.2	82%	75	5	.65
									50	1.44
									100	1.98
									200	2.75
									300	3.35
									400	3.95
CL2										
RG59 MATV 	2020 2020K	20 Solid CCS 25.9	FFEP .144	FOIL + 67% AL 10.3	FEP or KYNAR .207	16.9	82%	75	5	0.65
									50	1.88
									100	2.57
									211	3.70
									300	4.62
									400	5.49
CL2P & CATVP										
RG59 MATV 	5572	20 Solid CCS 56.4	FP .146	FOIL + 67% AL 10.5	PVC .242	16.2	82%	75	5	0.88
									50	1.80
									100	2.48
									200	3.45
									300	4.26
									400	4.97
CL2										
									450	5.30

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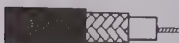
Recommended Cables for MAP/TOP (IEEE 802.4)

PRODUCT DESCRIPTION QUALIFICATIONS	PART NUMBER	CENTER CONDUCTOR AWG OR DIA. IN IN. WIRE TYPE NOM DCR OHMS/1000'	DIELECTRIC NOM O.D. IN INCHES	SHIELD CONSTRUCTION NOM DCR OHMS/1000'	JACKET & NOM O.D. IN INCHES	NOM CAP. P/Ft	NOM VEL. OF PROP.	NOM IMP. (OHMS)	NOMINAL ATTENUATION dB/100'	
.500 PLENUM TRUNK 	2311	.109 Solid CCAL 1.32	FFEP .450	ALS .500 20.4	N/A	16.4	86%	75	5	0.17
									50	0.58
									100	0.86
									200	1.29
									300	1.67
									450	2.16
CL2P & CATVP										
.625 PLENUM TRUNK 	2315	.137 Solid CCAL 0.56	FFEP .563	ALS .625 0.23	N/A	16.4	86%	75	5	0.10
									50	0.43
									100	0.68
									200	1.08
									300	1.44
									450	1.96
CL2P & CATVP										
R611 QUAD SHIELD MAP/TOP CARRIER BAND 	2288 2288K	14 Solid CCS 6.4	FFEP .280	2 FOILS + 60% AL 60% AL 3.7	FEP .378 KYNAR .372	16.0	84%	75	5	0.34
									10	0.47
									20	0.65
									100	1.42
									450	3.51
CL2P										
MAP/TOP CARRIER BAND R611 QUAD SHIELD 	5950	14 Solid CCS 14.29	FP .280	2 FOILS + 40% 1 AL 60% 1 AL	PVC .405	16.0	84%	75	5	.35
									10	0.45
									20	0.63
									100	1.28
									450	2.75
CL2										
MAP/TOP R611 CARRIER BAND 	5951	14 Solid CCS 14.3	FP .273	2 FOILS + 40% 1 AL 60% 1 AL	PVC .405	16.0	84%	75	5	.27
									10	.37
									20	.54
									100	1.33
									450	2.76
CL2										
R66 QUAD SHIELD MAP/TOP 	2228 2228K	18 Solid CCS 16.3	FFEP .180	2 FOILS + 60% 1-AL 60% 1-AL 5.26	FEP or KYNAR .264	15.8	84%	75	5	0.53
									10	0.72
									20	0.99
									100	2.06
									450	4.86
CL2P										
MAP/TOP R66 QUAD SHIELD 	5750	18 Solid CCS 35.5	FP .180	2 FOILS + 60% 1 AL 40% 1 AL 5.26	PVC .302	16.2	82%	75	5	0.65
									10	0.76
									20	0.96
									100	1.98
									450	4.21
CL2										

CALL US FOR INFORMATION
ON ANY UNLISTED PARTS OR EQUIPMENT.

Coaxial Non Plenum Cables

50 ohm baseband (broadcast/computer)

PRODUCT DESCRIPTION QUALIFICATIONS	PART NUMBER	CENTER CONDUCTOR AWG OR DIA. IN IN. WIRE TYPE NOM DCR OHMS/1000'	DIELECTRIC NOM O.D. IN INCHES	SHIELD CONSTRUCTION NOM DCR OHMS/1000'	JACKET & NOM O.D. IN INCHES	NOM CAP. P/FT	NOM VEL. OF PROP.	NOM IMP. (OHMS)	NOMINAL ATTENUATION MHz db/100'	
	RG58/U 3130	20 Solid BC 10.34	PE .116	95% TC 4.1	PVC .195	28.5	66%	53	50	3.10
									100	4.50
									200	6.80
									400	10.00
									700	14.00
									900	16.00
									1000	17.00
CL2 & 91354										
	RG8/U 3240	11 7/19 BC 1.15	FP .285	95% BC 1.1	PVC .405	26.0	78%	50	50	1.20
									100	1.80
									200	2.70
									400	4.20
									700	5.80
									900	6.70
									1000	7.10
4000	18.00									
CL2 & 91354										

Coaxial Non Plenum Cables

75 ohm broadband (MATV/broadcast/computer)

PRODUCT DESCRIPTION QUALIFICATIONS	PART NUMBER	CENTER CONDUCTOR AWG OR DIA. IN IN. WIRE TYPE NOM DCR OHMS/1000'	DIELECTRIC NOM O.D. IN INCHES	SHIELD CONSTRUCTION NOM DCR DHMS/1000'	JACKET & NOM O.D. IN INCHES	NOM CAP. PI/FI	NOM VEL. OF PROP.	NOM IMP. (OHMS)	NOMINAL ATTENUATION MHz db/100'	
	RG6 MATV 5725	18 Solid CCS 35.5	FP .180	FOIL + 40% AL 14.6	PVC .272	16.2	82%	75	5	.65
									10	.76
									50	1.44
									100	1.98
									200	2.75
									300	3.35
									400	3.95
									450	4.21
CL2										
	RG59 MATV 5571	20 Solid CCS 56.4	FP .146	FOIL + 40% AL 14.9	PVC .242	16.2	82%	75	5	0.88
									50	1.80
									100	2.48
									200	3.45
									300	4.26
									400	4.97
									450	5.30
									1000	8.13
CL2										

Coaxial Non Plenum Cables

93 ohm (broadcast/computer)

PRODUCT DESCRIPTION QUALIFICATIONS	PART NUMBER	CENTER CONDUCTOR AWG OR DIA. IN IN. WIRE TYPE NOM DCR OHMS/1000'	DIELECTRIC NOM O.D. IN INCHES	SHIELD CONSTRUCTION NOM DCR OHMS/1000'	JACKET & NOM O.D. IN INCHES	NOM CAP PI/FI	NOM VEL. OF PROP.	NOM IMP. (OHMS)	NOMINAL ATTENUATION MHz db/100'	
RG62 GENERAL PURPOSE IBM# 323921 	6699	22	AD/PE .146	95% BC	PVC .242	13.5	84%	93	10	0.81
		Solid CCS		2.6					50	1.80
		41.2							100	2.70
									200	3.90
									400	5.50
									700	7.60
									900	8.80
									1000	9.30
CL2 & 91478										

Twinaxial Non Plenum Cables

78 ohm (computer)

PRODUCT DESCRIPTION QUALIFICATIONS	PART NUMBER	CENTER CONDUCTOR AWG OR DIA. IN IN. WIRE TYPE NOM DCR OHMS/1000'	DIELECTRIC NOM O.D. IN INCHES	SHIELD CONSTRUCTION NOM DCR OHMS/1000'	JACKET & NOM O.D. IN INCHES	NOM CAP. PI/FI	NOM VEL. OF PROP.	NOM IMP. (OHMS)	NOMINAL ATTENUATION MHz db/100'
APPLETALK®	9212	2-22 (7/30) TC 15.7	NA	85% TC 4.68	PVC .185	19.7	66%	78	NA



CL2

PAIRED COMPUTER	9012	2-20 (7/28) TC .038 9.5	NA	93% TC 3.8	PVC .242 Blue	19.7	66%	78	NA
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CL2

PAIRED COMPUTER	9022	2-20 (7/28) TC .038 9.5	NA	FOIL + 57% TC 4.05	PVC .243 Blue	19.7	66%	78	NA
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CL2

Twinaxial Non Plenum Cables

100 ohm (computer)

DATA TWINAXIAL IBM# 7362211	7901	2-20 (7/28) 1-BC 1-TC 9.46	PE .240	95% TC 1.8	PVC .325	15.5	66%	100	1 0.40 10 1.10 20 1.50 50 2.50 100 4.10 200 6.40 400 10.20
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See Note 1
CL2X

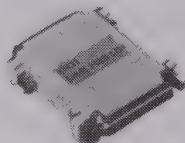
BURIAL TWINAXIAL	7905	2-20 (7/28) 1-BC 1-TC 9.46	PE .240	95% TC 1.8	PE .330	15.5	66%	100	1 0.40 10 1.10 20 1.50 50 2.50 100 4.10 200 6.40 400 10.20
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Note 1: Available in CL2 design.

OUR GOAL IS PROVIDING QUALITY PRODUCTS AND SERVICES
TO MEET YOUR NEEDS.

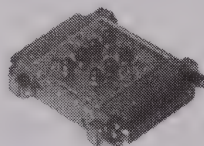
RS-232 SURGE ARRESTOR



Protects data lines from spikes and surges from other equipment or those picked up inductively. Eliminates surge-induced misreading of data and data loss. Fast MOVs on each of the RS-232 lines 2, 3, 4, 5, and 7. Male to female; insert at port or in-line.

GC No. 45-581—Price Each \$31.99

RS-232-C QUICK-CHECK PORT TESTER



Provides an easy method of checking computer and terminal equipment to be sure that signals are being generated. Standard RS-232 lines are monitored and LEDs indicate presence of data or control signals. A fast way to determine if a problem is in equipment or cables.

GC No. 45-580—Price Each \$31.99

BREAK-OUT BOX

An easy tool to help determine correct wiring of I/O ports. Plugs into RS-232 data lines (male to female). Jumper wires (supplied) are plugged into sockets to wire through or cross lines. Several bus sockets provided for jumpers.

GC No. 45-494—Price Each \$60.09

RS-232-C RECONFIGURATION KIT

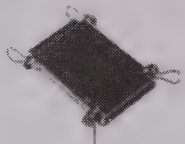


Permits the assembly of an in-line adapter for non-standard ports. Male-to-female 25DB connectors mounted on PC board with solder pads for connections and bus areas for tying lines together.

GC No. 45-480—Price Each \$21.99

GC No. 45-481—Kit for RS-449 Secondary Reconfiguration and other DB-9 equipped devices. Price Each \$19.89

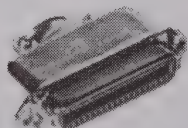
CENTRONICS-TYPE GENDER CHANGER



Female connectors on each end wired straight through. Permits connecting two male ends of parallel printer cables together. All-metal construction for strength and RFI shielding. Gold-plated contacts.

GC No. 45-4097—Price Each \$19.39

36-PIN CENTRONICS TYPE CONNECTORS



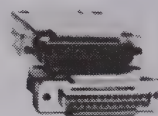
Complete connectors with all mounting hardware and shell for cable-end mounting (solder types may be removed from shell and panel mounted). Solder types are metal construction for strength and shielding. The IDC type requires no soldering; 22 or 24 AWG insulated wires are simply pushed into contacts.

GC No. 45-1010—Male IDC type. Price Each \$13.59

GC No. 45-1011—Solder type shielded female. Price Each \$6.09

GC No. 45-1012—Solder type shielded male. Price Each \$6.09

STANDARD "D" CONNECTORS



For cable mounting or shell may be discarded for panel mounting. All contacts molded in place permanently. All are solder type. Hardware is included.

GC No. 45-1035—9-contact male. Price Each \$5.19

GC No. 45-1036—9-contact female. Price Each \$5.19

GC No. 45-1131—15-contact male. Price Each \$6.09

GC No. 45-1132—26-contact female. Price Each \$6.09

GC No. 45-1060—25-contact male. Price Each \$6.89

GC No. 45-1061—25-contact female. Price Each \$6.89

GC No. 45-1121—37-contact male. Price Each \$7.79

SHIELDED CONNECTORS



The same as the standard connectors above, except that the shells are solid metal for strength and shielding; slightly higher in cost. Solder type; all mounting hardware included.

GC No. 45-1040—9-contact male. Price Each \$7.39

GC No. 45-1041—9 contact female. Price Each \$7.39

GC No. 45-1140—15-contact male. Price Each \$8.89

GC No. 45-1141—15-contact female. Price Each \$8.89

GC No. 45-1080—25-contact male. Price Each \$11.39

GC No. 45-1081—25-contact female. Price Each \$11.39

FLAT CABLE CONNECTORS

Insulation-piercing type for quick assembly to standard 25-conductor flat cable.

GC No. 45-1070—Male. Price Each \$12.89

GC No. 45-1071—Female. Price Each \$12.89

MALE DIN CONNECTORS



Cable mounting connector with solder type contacts and built-in strain relief.

GC No. 45-1155—5-contact, 180° configuration. Price Each \$1.89

RS-232 GENDER CHANGERS



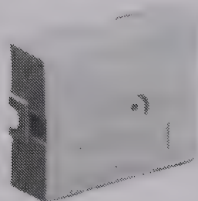
Gender changers modify or replace non-mating RS-232 cables by changing sex of connector. A fast and economical solution. All 25 lines wired straight through.

GC No. 45-4100—Male each end. Price Each \$12.59

GC No. 45-4101—Female each end. Price Each \$12.59

**THIS IS ONLY A PARTIAL LISTING OF
THE PRODUCTS WE HAVE AVAILABLE.
PLEASE CONTACT US FOR ADDITIONAL
PRODUCT INFORMATION.**

TELEPHONE ACCESSORIES



30-9600



30-9650

TELEPHONE DECOR WALL PLATES

The decor wall plates are available in white and ivory. They come complete with matching screws and enhance custom interiors. Use four conductor line cord and mount in standard electrical box.

GC No. 30-9767—Ivory 4 conductor. Price Each \$6.39
GC No. 30-9777—White 4 conductor. Price Each \$6.39

MODULAR-TO-MODULAR EXTENSION

Phone extension with modular plug at one end; two modular jacks (in plastic housing) at other. Ideal for conferences, telephone answering devices, etc. Overall length, 25 ft. straight or coiled cord. Beige color.

GC No. 30-9508—Straight cord. Price Each \$7.29

SURFACE JACK MODULAR CONVERTER

Converts standard installation to modular. When standard cover has been removed, modular connections can be easily made with attached spade terminals, then fasten modular cover on standard connecting block; it's that simple. Beige color.

GC No. 30-9600 Cover Assembly—Price Each \$2.49

MODULAR SURFACE JACK

Replaces standard connecting block. Can be used as distribution block for multiple phones. Beige color.

GC No. 30-9604 Surface Jack—4 conductor. Price Each \$3.69
GC No. 30-9607 Surface Jack—6 conductor. Price Each \$6.19
GC No. 30-9660 Surface Jack—8 conductor. Price Each \$6.69

RETROFIT PLUG

Permits standard phone to be used with modular system. Beige color.

GC No. 30-9652 Retrofit Plug—Price Each \$3.59

FLUSH JACK

For use with standard electrical boxes. Station wire easily and quickly connected to solderless terminals without stripping. Beige color.

GC No. 30-9707 Flush Jack—4 conductor. Price Each \$3.69
GC No. 30-9700 Flush Jack—6 conductor. Price Each \$4.29
GC No. 30-9706 Flush Jack—8 conductor. Price Each \$8.79

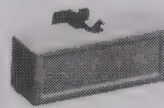
MINIATURE FLUSH JACK WITH COVER RING

For small SE-63-A box. Requires no soldering. Quick-connect terminations for station wires. Beige color.

GC No. 30-9702 Miniature Flush Jack—Price Each \$3.89



30-9700



3C-9652



30-9702

TELEPHONE WALL JACKS

These telephone wall jacks are constructed with UL 94V-0 flame retardant plastic. They comply with UL standard 1863 and also article 800-51 of the national electrical code.

GC No.	Description	Price Each
30-9757 BU	Flush wall jack	\$1.85
30-9754 BU	Quick-mount wall phone jack	2.80
30-9753 BU	Dual flush jack	3.07
30-9756 BU	Modular surface jack	1.93

DUAL MODULAR TELEPHONE COUPLER

Dual in-line coupler allows modular telephone line cords to be connected together for greater length. Cord may be extended up to 50 feet without any loss of signal strength. Built to the specifications of major telephone companies.

GC No. 30-9678 Telephone Cord Coupler—Price Each \$2.39

MODULAR TELEPHONE EXTENSION CORD

Straight extension cord with modular plug at each end. Two lengths available. Silver color.

GC No. 30-9515—15-ft. cord. Price Each \$3.89
GC No. 30-9516—25 ft. cord. Price Each \$4.79

MODULAR PHONE REPLACEMENT CORD

Straight cord with modular plug at one end, spade terminals at other. Available in 6- or 25-ft. lengths. Silver color.

GC No. 30-9540—6-ft. cord. Price Each \$2.79
GC No. 30-9542—25-ft. cord. Price Each \$5.59

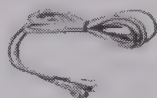
COILED MODULAR HAND SET CORD

Coiled cord with modular plug at each end. Available in 15- or 25-ft. lengths, and in a variety of colors.

GC No.	Color	Length, Ft.	Price Each
30-9519	Black	15	\$4.09
30-9520	White	15	4.09
30-9521	Beige	15	4.09
30-9529	Black	25	5.59
30-9530	White	25	5.59
30-9531	Beige	25	5.59

PRICES SHOWN ARE FOR REFERENCE ONLY. PLEASE CALL US FOR CURRENT QUOTES.

MODULAR TELEPHONE REPLACEMENT CORD



Use for converting "hard-wired" telephones to modular, or as a replacement/extension. Spade terminals one end; modular plug other end.

GC No. 30-9540—6 ft. Silver. Price Each	\$2.79
GC No. 30-9542—25 ft. Silver. Price Each	\$5.59
GC No. 30-9544—6 ft. Ivory. Price Each	\$2.79
GC No. 30-9545—12 ft. Ivory. Price Each	\$5.59

MODULAR PLUG TO MODULAR JACK EXTENSION CORD



Extension cord with modular plug and jack on each end. Cord offers the convenience of adding 25-foot extension to existing telephone system. Modular plug at one end snaps into wall receptacle while modular jack at the other end accepts line cord from existing telephone.

GC No. 30-9506—25 ft. Ivory. Price Each	\$6.29
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MODULAR PLUG TO TWIN MODULAR JACKS EXTENSION CORD



The 25-foot modular telephone cord has a modular plug on one end and a modular duplex jack on the other end. The modular plug snaps into wall receptacles. The duplex modular jack accepts cords from a telephone and answering machine, or other auxiliary device, at the same time.

GC No. 30-9508—25 ft. Ivory. Price Each	\$7.29
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MODULAR PLUG TO PLUG EXTENSION CORD

Use to extend length of cord between telephone and wall jack or as an extension cord.

4 CONDUCTOR		
GC No.	Description	Price Each
30-9513	15 ft. Ivory	\$ 3.89
30-9514	25 ft. Ivory	4.79
30-9515	15 ft. Silver	3.89
30-9516	25 ft. Silver	4.79
30-9517	25 ft. Silver coiled	7.29
30-9502	15 ft. White	3.89
30-9503	25 ft. White	4.79
30-9507	25 ft. Black	4.79
30-9509	25 ft. Almond	4.79
30-9512	25 ft. Ash	4.79
30-9518	25 ft. Brown	4.79

6 CONDUCTOR		
30-9566	15 ft. Silver	\$ 6.29
30-9576	25 ft. Silver	8.79

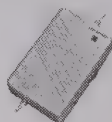
8 CONDUCTOR		
30-9568	15 ft. Silver	\$ 8.29
30-9578	25 ft. Silver	11.29

5-OUTLET MODULAR JUNCTION BOX WITH CORD

Permits up to five telephone related devices to be used from single modular jack.

GC No. 30-9802—6 ft. Ivory. Price Each	\$9.99
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TELEPHONE AMPLIFIER



The Telephone Amplifier increases volume and will improve communication. It has an adjustable volume control which can be increased up to five times the original level even during a conversation. The Telephone Amplifier operates on a 9V battery and has an LED which indicates when battery needs to be replaced.

GC No. 30-7501—Telephone Amplifier. Price Each	\$33.29
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MODULAR HANDSET COIL CORDS



Coiled cord with modular plugs at both ends. Available in 3 lengths and 11 color selections. Cords fit between handset and phone base.

GC No.	Description	Price Each
30-9565	6 ft. Almond	\$3.39
30-9519	12 ft. Black	4.09
30-9520	12 ft. White	4.09
30-9521	12 ft. Beige	4.09
30-9524	12 ft. Chocolate Brown	4.09
30-9525	12 ft. Almond	4.09
30-9529	25 ft. Black	5.59
30-9530	25 ft. White	5.59
30-9531	25 ft. Beige	5.59
30-9534	25 ft. Chocolate Brown	5.59
30-9535	25 ft. Almond	5.59
30-9528	12 ft. Ivory	4.09
30-9538	25 ft. Ivory	5.59
30-9541	12 ft. Gray	4.09
30-9551	25 ft. Gray	5.59
30-9526	12 ft. Ash	4.09
30-9536	25 ft. Ash	5.59

22-GA. SOLID TELEPHONE HOOK-UP WIRE

30-9902	25' Hank	4 Conductor	\$ 4.59
30-9900	50' Hank	4 Conductor	7.69
30-9901	100' Hank	4 Conductor	13.49
30-9905	500' Knockout Carton	4 Conductor	23.29
30-9959	1000' Knockout Carton	4 Conductor	44.64
30-9953	1000' Pull-Out Box	4 Conductor	44.64
30-9960	5000' Spool	4 Conductor	223.27
30-9969	100' Hank	6 Conductor	28.59
30-9970	500' Knockout Carton	6 Conductor	40.24
30-9971	1000' Knockout Carton	6 Conductor	77.06
30-9972	3000' Spool	6 Conductor	219.34

24-GA. SOLID TELEPHONE HOOK-UP WIRE

30-9956	100' Hank	4 Conductor	\$ 10.39
30-9957	500' Knockout Box	4 Conductor	18.43
30-9958	1000' Knockout Box	4 Conductor	33.27
30-9952	1000' Pull-Out Box	4 Conductor	33.27
30-9980	5000' Spool	4 Conductor	156.07
30-9976	1000' Knockout Carton	6 Conductor	45.51
30-9982	4000' Spool	6 Conductor	166.93

HANDSET MODULAR PLUGS

Use with flat line cord or coiled cord for making replacement cables or extension cords. Use modular handset crimp Tool GC #43-005.

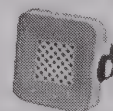
GC No. 30-9909—4 Conductor PXG of 100. Price Each	\$34.79
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MODULAR PLUGS

Use with flat-line cord for making replacement cables or extension cords. Use modular crimp tool GC #30-9951.

GC No.	Description	Price Each
30-9910	Pkg. of 10 4-Conductor	\$ 3.89
30-9911	Pkg. of 100 4-Conductor	34.79
30-9914	Pkg. of 10 6-Conductor	7.29
30-9915	Pkg. of 100 6-Conductor	60.69
30-9917	Pkg. of 100 8-Conductor	114.89

PORTABLE TELEPHONE AMPLIFIER



The Portable Telephone Amplifier has the ability to easily be placed on any phone. The Portable Amplifier can be used even on cordless or pay phones. It is lightweight, durable and reliable. One AA battery is required (not included).

GC No. 30-7507—Portable Telephone Amplifier. Price Each	\$24.89
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EQUIPMENT RACK CABINETS

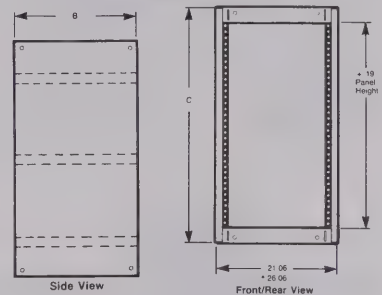
REFK - ECONOMY RACKS

A knock-down rack cabinet that is very simple to assemble, only one bolt in each corner locks the cabinet sides to the top and bottom. The strength comes from the interlocking structure. These economy racks are designed to be used as single free-standing units. These cabinets are available in two front to back depths and two left to right widths. Units are furnished with four combination rails with ¼ - 20 bolts and nuts to mount into cabinet and clip nuts to mount equipment onto rails. Because more than 2 rail supports are used on cabinets over 42" high, partial height rails can be installed to give more flexibility in use. Four adjustable leveling feet are standard on all models. Dress trim kits, rack desks, blank panels, castors and special doors are available to customize the REFK series.

19" WIDE RACK PART NUMBER †	24" WIDE RACK PART NUMBER †	DIMENSIONS		
		A IN. / UNITS	B IN.	C IN.
REFK1903517	REFK2403517	35.0 / 20	17.5	40.0
REFK1904217	REFK2404217	42.0 / 24		47.0
REFK1904917	REFK2404917	49.0 / 28		54.0
REFK1905617	REFK2405617	56.0 / 32		61.0
REFK1906317	REFK2406317	63.0 / 36		68.0
REFK1907017	REFK2407017	70.0 / 40		75.0
REFK1907717	REFK2407717	77.0 / 44		82.0
REFK1908417	REFK2407717	84.0 / 48		89.0
REFK1903524	REFK2403524	35.0 / 20	24.5	40.0
REFK1904224	REFK2404224	42.0 / 24		47.0
REFK1903494	REFK2404924	49.0 / 28		54.0
REFK1905624	REFK2405624	56.0 / 32		61.0
REFK1906324	REFK2406324	63.0 / 36		68.0
REFK1907024	REFK2407024	70.0 / 40		75.0
REFK1907724	REFK2407724	77.0 / 44		82.0
REFK1908424	REFK2408424	84.0 / 48		89.0

† Specify color with the following suffix: GF1=Gulf Blue Textured, GF2=Gulf Blue Smooth, BK1=Black Textured, BK2=Black Smooth, GY1=Grey Textured, GY2=Grey Smooth.

Other colors are available on special order.



REFK - DRESS TRIM KIT

This is an attractive, brushed aluminum extruded trim kit which attaches to the cabinet face by means of concealed screws. Comes in kit form for field assembly.

TRIM KIT for 19" WIDE RACK PART NUMBER	TRIM KIT for 24" WIDE RACK PART NUMBER	PANEL HEIGHT of REFK RACK IN. / UNITS	OVERALL HEIGHT IN.
RETK19035	RETK24035	35 / 20	40.0
RETK19042	RETK24042	42 / 24	47.0
RETK19049	RETK24049	49 / 28	54.0
RETK19056	RETK24056	56 / 32	61.0
RETK19063	RETK24063	63 / 36	68.0
RETK19070	RETK24070	70 / 40	75.0
RETK19077	RETK24077	77 / 44	82.0
RETK19084	RETK24084	84 / 48	89.0



**WE CARRY MOST
MAJOR BRANDS. IF YOU CAN'T FIND WHAT YOU WANT,
CALL US FOR INFORMATION.**

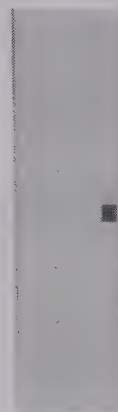


EQUIPMENT RACK CABINETS DOORS

CLEAR SWING DOOR

These doors feature magnetic catch with keyed lock. They fit punched side of REFK rack only. Opens left or right by inverting. Allows complete access to panel rails when opened. Surface mounted and covers entire frame.

DOOR for 19" WIDE RACK PART NUMBER †	DOOR for 24" WIDE RACK PART NUMBER †	PANEL HEIGHT of REFK RACK IN./UNITS	OVERALL HEIGHT of DOOR IN.
RSDC19021	RSDC24021	21.0 / 12	26.4
RSDC19024	RSDC24024	24.5 / 14	29.9
RSDC19026	RSDC24026	26.25 / 15	31.7
RSDC19028	RSDC24028	28.0 / 16	33.4
RSDC19035	RSDC24035	35.0 / 20	40.4
RSDC19042	RSDC24042	42.0 / 24	47.4
RSDC19049	RSDC24049	49.0 / 28	59.4
RSDC19056	RSDC24056	56.0 / 32	61.4
RSDC19063	RSDC24063	63.0 / 36	68.4
RSDC19070	RSDC24070	70.0 / 40	75.4
RSDC19077	RSDC24077	77.0 / 44	82.4
RSDC19084	RSDC24084	84.0 / 48	89.4



FLUSH DOOR

These doors feature roller catch with keyed lock. For best appearance use on the non-punched side of REFK rack. Mounts within the panel space flush with frame. Opens left or right by inverting. Allows access to space between panel rails when opened.

DOOR for 19" WIDE RACK PART NUMBER †	DOOR for 24" WIDE RACK PART NUMBER †	PANEL HEIGHT of REFK RACK IN./UNITS	OVERALL HEIGHT of DOOR IN.
RSDF19021	RSDF24021	21.0 / 12	20.8
RSDF19024	RSDF24024	24.5 / 14	24.3
RSDF19026	RSDF24026	26.25 / 15	26.1
RSDF19028	RSDF24028	28.0 / 16	27.9
RSDF19035	RSDF24035	35.0 / 20	34.9
RSDF19042	RSDF24042	42.0 / 24	41.9
RSDF19049	RSDF24049	49.0 / 28	48.9
RSDF19056	RSDF24056	56.0 / 32	55.9
RSDF19063	RSDF24063	63.0 / 36	62.9
RSDF19070	RSDF24070	70.0 / 40	69.9
RSDF19077	RSDF24077	77.0 / 44	76.9
RSDF19084	RSDF24084	84.0 / 48	83.9



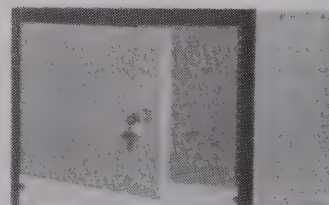
PANEL RAIL DOOR

Installs on any 19" panel space. Hinges bolt directly to the panel rail. When door is open, space between panel rails is completely accessible. Overall depth of door 5/8".

DOOR PART NUMBER †	DOOR HEIGHT IN./UNITS	DOOR PART NUMBER †	DOOR HEIGHT IN./UNITS
RSDP19010	10.5 / 6	RSDP19017	17.5 / 10
RSDP19012	12.25 / 7	RSDP19022	22.75 / 13
RSDP19014	14.0 / 8	RSDP19028	28.0 / 16

† Specify color with the following suffix: GF1=Gulf Blue Textured, GF2=Gulf Blue Smooth, BK1=Black Textured, BK2=Black Smooth, GY1=Grey Textured, GY2=Grey Smooth

Other colors are available on special order.





EQUIPMENT RACK CABINETS DOORS

LOUVERED DOOR

These doors feature roller catch with keyed lock. For best appearance use on the non-punched side of REFK rack. Mounts within the panel space flush with frame. Right hand opening only with louver vents facing down. Allows access to space between panel rails when opened.

DOOR for 19" WIDE RACK PART NUMBER †	DOOR for 24" WIDE RACK PART NUMBER †	PANEL HEIGHT of REFK RACK IN./UNITS	OVERALL HEIGHT of DOOR IN.
RSDL19021	RSDL24021	21.0 / 12	20.1
RSDL19024	RSDL24024	24.5 / 14	24.4
RSDL19026	RSDL24026	26.25 / 15	26.1
RSDL19028	RSDL24028	28.0 / 16	27.9
RSDL19035	RSDL24035	35.0 / 20	34.9
RSDL19042	RSDL24042	42.0 / 24	41.9
RSDL19049	RSDL24049	49.0 / 28	48.9
RSDL19056	RSDL24056	56.0 / 32	55.9
RSDL19063	RSDL24063	63.0 / 36	62.9
RSDL19070	RSDL24070	70.0 / 40	69.9
RSDL19077	RSDL24077	77.0 / 44	76.9
RSDL19084	RSDL24084	84.0 / 48	83.9

† Specify color with the following suffix: GF1=Gulf Blue Textured, GF2=Gulf Blue Smooth, BK1=Black Textured, BK2=Black Smooth, GY1=Grey Textured, GY2=Grey Smooth
Other colors are available on special order.

PLEXI DOOR

These doors feature slam catch with keyed lock. They fit punched side of REFK rack only. Surface mounted and covers entire frame. Opens left or right by inverting. Complete access to panel rails when open. Available in smoked plexi with black frame only.

DOOR for 19" WIDE RACK PART NUMBER	DOOR for 24" WIDE RACK PART NUMBER	PANEL HEIGHT of REFK RACK IN./UNITS	OVERALL HEIGHT of DOOR IN.
RSPD19021BK1	RSPD24021BK1	21.0 / 12	24.8
RSPD19024BK1	RSPD24024BK1	24.5 / 14	28.3
RSPD19026BK1	RSPD24026BK1	26.25 / 15	30.1
RSPD19028BK1	RSPD24028BK1	28.0 / 16	31.8
RSPD19035BK1	RSPD24035BK1	35.0 / 20	38.8
RSPD19042BK1	RSPD24042BK1	42.0 / 24	45.8
RSPD19049BK1	RSPD24049BK1	49.0 / 28	52.8
RSPD19056BK1	RSPD24056BK1	56.0 / 32	59.8
RSPD19063BK1	RSPD24063BK1	63.0 / 36	66.8
RSPD19070BK1	RSPD24070BK1	70.0 / 40	73.8
RSPD19077BK1	RSPD24077BK1	77.0 / 44	80.8
RSPD19084BK1	RSPD24084BK1	84.0 / 48	87.8

RAIL MOUNTED SHELF

Provides economical internal or external shelf or work space. Made of 14 ga CRS. Comes in solid or ventilated construction. Available in two colors only.

19" WIDE SHELF PART NUMBER ††	24" WIDE SHELF PART NUMBER ††	TYPE	HEIGHT IN./UNITS	DEPTH IN.
RASU190515	RASU240515	SOLID	5.0 / 3	15
RASV190515	RASV240515	VENTED		

†† Specify color with the following suffix: BK1=Black Textured or GY2=Grey Smooth

**BE SURE TO WATCH FOR OUR
"POWER SOURCE" BROCHURES.**

RELAY RACKS

HEAVY DUTY RELAY RACKS

Racks are drilled and tapped #10-32 alternate EIA spacing on front flange only. Formed from 10 ga steel 3.0" x 1.4" steel rails. Accepts standard 19" panels. Bolt together steel construction. Furnished in ASA 61 grey finish only. Rack comes un-assembled.

PART NUMBER	DESCRIPTION
DNRR63HDK	HEAVY DUTY RELAY RACK, STEEL, 63.0" / 36 UNITS HIGH
DNRR70HDK	HEAVY DUTY RELAY RACK, STEEL, 70.0" / 40 UNITS HIGH
DNRR77HDK	HEAVY DUTY RELAY RACK, STEEL, 77.0" / 44 UNITS HIGH
DNRR84HDK	HEAVY DUTY RELAY RACK, STEEL, 84.0" / 48 UNITS HIGH

LIGHT DUTY RELAY RACKS

Racks are drilled and tapped #10-32 alternate EIA spacing on front flange only. Formed from 12 ga steel steel rails. Accepts standard 19" panels. Bolt together steel construction. Furnished in ASA 61 grey finish only. Rack comes un-assembled.

PART NUMBER	DESCRIPTION
DNRR63LDK	LIGHT DUTY RELAY RACK, STEEL, 63.0" / 36 UNITS HIGH
DNRR70LDK	LIGHT DUTY RELAY RACK, STEEL, 70.0" / 40 UNITS HIGH
DNRR77LDK	LIGHT DUTY RELAY RACK, STEEL, 77.0" / 44 UNITS HIGH
DNRR84LDK	LIGHT DUTY RELAY RACK, STEEL, 84.0" / 48 UNITS HIGH

ALUMINUM SERIES RELAY RACKS

Racks are drilled and tapped #10-32 alternate EIA spacing on front and rear flanges. Made from aluminum channel 3.0" x 1.4" rails. Accepts standard 19" panels. Bolt together construction. Furnished unpainted only. Rack comes un-assembled.

PART NUMBER	DESCRIPTION
DNRR63ALK	ALUMINUM RELAY RACK, 63.0" / 36 UNITS HIGH
DNRR70ALK	ALUMINUM RELAY RACK, 70.0" / 40 UNITS HIGH
DNRR77ALK	ALUMINUM RELAY RACK, 77.0" / 44 UNITS HIGH
DNRR84ALK	ALUMINUM RELAY RACK, 84.0" / 48 UNITS HIGH

TABLE RELAY RACKS

Welded and formed 18 ga steel construction for desk or bench mounting. Deep bases with four rubber feet provide maximum stability. Rails are punched with 0.281" holes to accept 1/4-20 bolts or 10-32 clip nuts. Furnished in ASA 61 Grey baked enamel finish. Supplied with four 10-32 clip nuts for each 7" of panel height.

PART NUMBER	DESCRIPTION
1465B	TABLE RELAY RACK, STEEL, 21.0" / 12 UNITS HIGH
1465C	TABLE RELAY RACK, STEEL, 28.0" / 16 UNITS HIGH
1465E	TABLE RELAY RACK, STEEL, 35.0" / 20 UNITS HIGH
1465G	TABLE RELAY RACK, STEEL, 35.0" / 20 UNITS HIGH

**CONSULT OUR STAFF OF
ELECTRONICS EXPERTS ON ALL YOUR SPECIAL
EQUIPMENT OR COMPONENT NEEDS.**

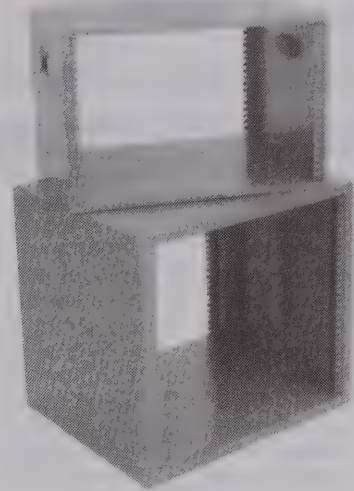


RACK CASES & CABINETS

RCBS SERIES DESKTOP CASES

Steel non-vented construction. Supplied with ABS handles, 10-32 clip nuts, and rubber feet. Accept standard 19" panels. Fixed front and back punched rails with EIA spacing. Stocked in Grey but available in all standard colors.

13.5" DEEP PART NUMBER †	17.5" DEEP PART NUMBER †	PANEL HEIGHT IN./UNITS	OVERALL DIMENSIONS	
			HEIGHT	WIDTH
RCBS1900313	N/A	3.50 / 2	4.50	21.00
RCBS1900513	RCBS1900517	5.25 / 3	6.25	
RCBS1900713	RCBS1900717	7.00 / 4	8.00	
RCBS1900813	RCBS1900817	8.75 / 5	9.75	
RCBS19001013	RCBS19001017	10.50 / 6	11.50	
RCBS19001213	RCBS19001217	12.25 / 7	13.25	
RCBS19001413	RCBS19001417	14.00 / 8	15.00	



RCHS SERIES DESKTOP CASES

Steel non-vented construction. No carrying handles or feet. Accept standard 19" panels. Fixed front and back punched rails with EIA spacing. Stocked in CC1 Charcoal or GF1 Blue but available in all standard colors.

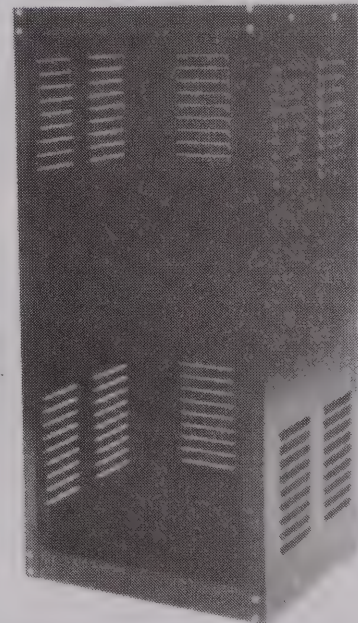
13.5" DEEP PART NUMBER	17.5" DEEP PART NUMBER	PANEL HEIGHT IN./UNITS	OVERALL DIMENSIONS	
			HEIGHT	WIDTH
RCHS1900313 †	N/A	8.75 / 5	10.75	21.00
RCHS1900513 †	RCHS1900517 †	10.50 / 6	12.50	
RCHS1900713 †	RCHS1900717 †	14.00 / 8	16.00	
RCHS1900813 †	RCHS1900817 †	17.50 / 10	19.50	
RCHS19001013 †	RCHS19001017 †	22.75 / 13	24.75	
RCHS19001213 †	RCHS19001217 †	28.00 / 16	30.00	

† Specify color with the following suffix: GF1=Gulf Blue Textured, GF2=Gulf Blue Smooth, BK1=Black Textured, BK2=Black Smooth, GY1=Grey Textured, GY2=Grey Smooth
Other colors are available on special order.

KRAC SERIES KNOCKDOWN RACK CABINETS

Top and bottom made of 16 ga CRS with 14 ga CRS sides for rigidity. Rear door has flush key lock and low profile pull handle. Sides and rear door have internal louvers. Knockouts located in rear of top and bottom. Three 2.75" holes in base for cable entry. Weld nuts in top and bottom provide easy assembly. Shipped unassembled. Standard 19" fixed panel rails punched .281" on EIA spacing. Comes with 10-32 clip nuts. Finished in black semigloss baked enamel only.

PART NUMBER	PANEL HEIGHT IN./UNITS	OVERALL DIMENSIONS		
		HEIGHT	WIDTH	DEPTH
KRAC36BK2	36.75 / 21	41.75	21.86	18.50
KRAC42BK2	42.00 / 24	47.00		
KRAC61BK2	61.25 / 35	66.25		
KRAC70BK2	70.00 / 40	75.00		
KRAC77BK2	77.00 / 44	82.00		



**WE CARRY MOST MAJOR BRANDS.
IF YOU CAN'T FIND WHAT YOU
WANT, CALL US FOR INFORMATION.**



RACK MOUNT PANELS

BLANK FLAT PANELS

Economical panels made from high quality .125" thick aluminum. Stocked in 19" wide sizes but also available in 24" wide on special order. Mounting hardware sold separately.

UNFINISHED ALUM PART NUMBER	BLACK PAINTED ALUM PART NUMBER	GREY PAINTED ALUM PART NUMBER	PANEL HEIGHT	
			IN.	UNITS
PBPA19001UNF	PBPA19001BK1	PBPA19001GY2	1.75	1
PBPA19003UNF	PBPA19003BK1	PBPA19003GY2	3.5	2
PBPA19005UNF	PBPA19005BK1	PBPA19005GY2	5.25	3
PBPA19007UNF	PBPA19007BK1	PBPA19007GY2	7.0	4
PBPA19008UNF	PBPA19008BK1	PBPA19008GY2	8.75	5
PBPA19010UNF	PBPA19010BK1	PBPA19010GY2	10.5	6
PBPA19012UNF	PBPA19012BK1	PBPA19012GY2	12.25	7
PBPA19014UNF	PBPA19014BK1	PBPA19014GY2	14.0	8
PBPA19015UNF	PBPA19015BK1	PBPA19015GY2	15.75	9
PBPA19017UNF	PBPA19017BK1	PBPA19017GY2	17.5	10
PBPA19019UNF	PBPA19019BK1	PBPA19019GY2	19.25	11
PBPA19021UNF	PBPA19021BK1	PBPA19021GY2	21.0	12
PBPA19022UNF	PBPA19022BK1	PBPA19022GY2	22.75	13
PBPA19024UNF	PBPA19024BK1	PBPA19024GY2	24.5	14
PBPA19026UNF	PBPA19026BK1	PBPA19026GY2	26.25	15
PBPA19028UNF	PBPA19028BK1	PBPA19028GY2	28.0	16
PBPA19029UNF	PBPA19029BK1	PBPA19029GY2	29.75	17
PBPA19031UNF	PBPA19031BK1	PBPA19031GY2	31.5	18

PREPUNCHED PATCH PANELS

These prepunched 19" rack mount panels are finished in BK3 black satin baked enamel with white silkscreened numbers for easy wiring identification. Made from 16 ga steel.

PANEL PART NUMBER	CONNECTOR TYPE	NUMBER OF POSITIONS	LAYOUT	PANEL HEIGHT	
				IN.	UNITS
DNDB916BK3	DE-9	16	1 X 16	3.5	2
DNDB932BK3	DE-9	32	2 X 16	7.0	4
DNDB1516BK3	DA-15	16	1 X 16	3.5	2
DNDB1532BK3	DA-15	32	2 X 16	7.0	4
DNDB2516BK3	DB-25	16	1 X 16	3.5	2
DNBNC16BK3	BNC	16	1 X 16	1.75	1
DNBNC32BK3	BNC	32	2 X 16	3.5	2

VENTILATION PANELS

Both round slotted and louvered vent panels are available. Made from 16 ga steel. Finished in BK3 black paint. For mounting to 19" rack rails.

LOUVERED PANEL PART NUMBER	SLOTTED PANEL PART NUMBER	PANEL HEIGHT	
		IN.	UNITS
N/A	PVSS1900301BK3	3.5	2
PVLL19005BK3	PVSS1900301BK3	5.25	3
PVLL19007BK3	N/A	7.0	4
PVLL19008BK3	N/A	8.75	5
PVLL19010BK3	N/A	10.5	6

**THROUGH OUR BUYING GROUP ASSOCIATION WITH EDBA WE CAN OFFER
YOU ACCESS TO MANY LINES NOT SHOWN IN THIS CATALOG.**



D-Sub For Ribbon Cable D-Sub Connectors

D-SUB (SOLDER TYPE)

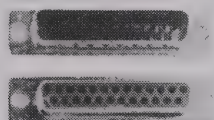


- All tin plated version of plug with grounding indents on shell
- Gold plated contacts
- White plastic fillings

Zinc Plated		Tin Plated	
DS-9P	DS-23S	DS-9P/T	DS-25P/T
DS-9S	DS-25P	DS-9S/T	DS-25S/T
DS-15P	DS-25S	DS-15P/T	DS-37P/T
DS-15S	DS-37P	DS-15S/T	DS-37S/T
DS-19P	DS-37S	DS-19P/T	DS-50P/T
DS-19S	DS-50P	DS-19S/T	DS-50S/T
DS-23P	DS-50S		

P = Plug (Male) S = Socket (Female)

D-SUB (CRIMP-TYPE)

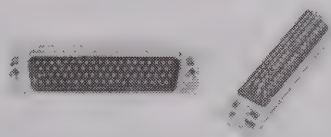


- All tin plated version of plugs with grounding indents on shells
- All pins gold plated
- Black plastic fillings

Zinc Plated	Tin Plated
DH-9HP	DH-9HP/T
DH-9HS	DH-9HS/T
DH-15HP	DH-15HP/T
DH-15HS	DH-15HS/T
DH-25HP	DH-25HP/T
DH-25HS	DH-25HS/T
DH-37HP	DH-37HP/T
DH-37HS	DH-37HS/T
	DH-50HP/T
	DH-50HS/T

P = Plug (Male) S = Socket (Female)

HIGH DENSITY (SOLDER TYPE)



- All plugs with grounding indents on shells
- Gold plated contacts
- White plastic fillings
- All tin plated shell

Solder-Type Tin Plated Shell	
DHS-15P	DHS-44S
DHS-15S	DHS-62P
DHS-26P	DHS-62S
DHS-26S	DHS-78P
DHS-44P	DHS-78S

P = Plug (Male) S = Socket (Female)

HIGH DENSITY (CRIMP TYPE)

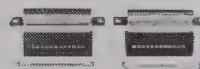


DHD-44HP DHD-44HS

- All plugs with grounding indents on shells
- All pins gold plated
- Black plastic fillings
- All tin plated shells

Tin Plated Shell	
DHD-15HP	DHD-44HS
DHD-15HS	DHD-62HP
DHD-26HP	DHD-62HS
DHD-26HS	DHD-78HP
DHD-44HP	DHD-78HS

METAL SHELL (BLACK, ZINC PLATED) FOR RIBBON CABLE



IDC-25MA IDC-25FA

- Metal, zinc plated shell
- Black plastic fillings
- Gold plated contacts
- Metal strain relief

IDC-9FA	IDC-25FA
IDC-9MA	IDC-25MA
IDC-15FA	IDC-37FA
IDC-15MA	IDC-37MA

METAL SHELL (BLUE, TIN PLATED) FOR RIBBON CABLE



IDC-25FB IDC-25MB

- Metal, tin plated shell
- All plugs w/grounding indents on shell
- Low profile, 0.71" total thickness after crimp

IDC-9FB	IDC-25FB
IDC-9MB	IDC-25MB
IDC-15FB	IDC-37FB
IDC-15MB	IDC-37MB

- Blue plastic fillings
- Gold plated contacts
- Metal strain relief

ALL PLASTIC SHELL (BLUE) FOR RIBBON CABLE



IDC-25M-BLUE IDC-25F-BLUE

IDC-9F-BLUE	IDC-25F-BLUE
IDC-9M-BLUE	IDC-25M-BLUE
IDC-15F-BLUE	IDC-37F-BLUE
IDC-15M-BLUE	IDC-37M-BLUE

D-SUB, IDC TYPE FOR ROUND CABLE



DSL-25P DSL-25S

- Metal, tin plated shell
- All plugs with grounding indents on shell
- Gold plated contacts
- 28-24 AWG stranded wire
- Clip by hand, no tool needed

DSL-9P	DSL-25P
DSL-9S	DSL-25S

P = Plug (Male) S = Socket (Female)

CALL US FOR YOUR SPECIAL ORDER NEEDS ON CABLE ASSEMBLIES.



D-Sub Back & Dust Covers

GRAY PLASTIC HOODS



DP-25C

- Includes necessary hardware for assembly
- Metal clamp strain relief

DP-9C	For DB9 pin or HiDen (High Density) 15 pin
DP-15C	For DB15 pin or HD26 pin
DP-25C	For DB25 pin or HD44 pin
DP-37C	For DB37 pin or HD62 pin
DP-50C	For DB50 pin or HD78 pin

METALIZED PLASTIC HOODS



DN-25C

- Includes necessary hardware for assembly
- Metal clamp strain relief
- Light weight alternative for metal hoods

DN-9C	For DB9 pin or HiDen (High Density) 15 pin
DN-15C	For DB15 pin or HD26 pin
DN-19C	For DB19 pin
DN-25C	For DB25 pin or HD44 pin
DN-37C	For DB37 pin or HD62 pin
DN-50C	For DB50 pin or HD78 pin

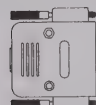
HOOD WITH GRAY PLASTIC



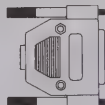
DB-25C/S

DP-9C/S	For DB9 pin or HiDen (High Density) 15 pin
DP-15C/S	For DB15 pin or HD26 pin
DB-25C/S	For DB25 pin or HD44 pin

HOODS WITH THUMB SCREWS



DDP-25C
DDN-25C



DB-SPT-25C

- Includes necessary hardware for assembly
- Metal clamp strain relief
- Thumb screw w/knurled

Cap-Type,
Gray Plastic

DDP-9CT
DDP-15CT
DDP-25CT
DDP-37CT

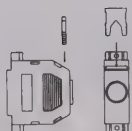
Cap-Type,
Metalized Plastic

DDN-9CT
DDN-15CT
DDN-19CT
DDN-25CT
DDN-37CT

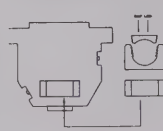
Cap-Type,
Gray Plastic

DP-SPT-9C
DP-SPT-25C

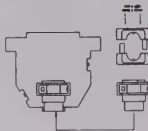
SNAP SHUT HOODS



DP-25CA



DP-25CB



DP-25CT

- Includes necessary hardware for assembly
- Snap shut strain relief

DP-9CB	Snap shut plastic strain relief
DP-25CB	Snap shut plastic strain relief
DP-25CT	Snap shut "T" strain relief
DP-25CA	Push on hood with side slide-in strain relief
DP-36CB	Snap shut w/plastic strain relief for Centronic 36C

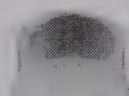
DUST COVER (FOR D-SUB & MINI DIN)



DST-D15P



DST-D25P



DST-MD8P

- Flexible translucent plastic
- Protect connector from dust or moisture
- Also for Centronic and DIN connectors

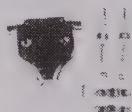
Dust Cover for D-Sub

DST-D9P
DST-D9S
DST-D15P
DST-D15S

Dust Cover for Mini DIN

DST-MD8P
DST-MD9P

METAL HOODS



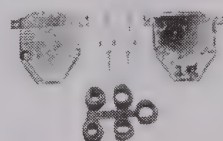
DM-25C

- Provide EMI shielding
- Includes necessary hardware for assembly
- Metal clamp strain relief
- Die cast metal

Die Cast Metal Hood, w/Hardware

DM-9C/6	6.5 mm dia. cable exit hole
DM-9C/8	8.5 mm dia. cable exit hole
DM-15C	
DM-25C	
DM-37C	

METAL HOODS W/GROMMETS



DM-25C/GR

Die Cast Metal Hood

DM-9C/GR
DM-15C/GR
DM-25C/GR
DM-37C/GR
DM-50C/GR

- Provide EMI shielding
- Includes necessary hardware for assembly
- Rubber grommets w/various inside diameter for strain relief
- Packaged w/3 to 5 grommets for each set of hoods
- Die cast metal

SPECIAL APPLICATION HOODS



DP-25/9C-G



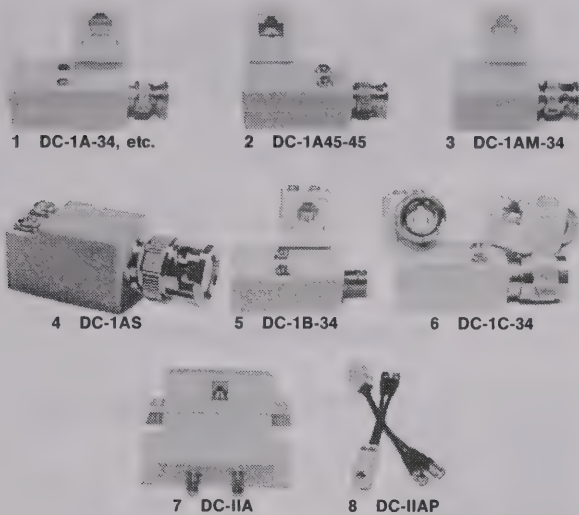
DP-25CR

- All hoods and covers include necessary hardware for assembly

DP-25/9C	DB25 to DB9 adapter cover, black
DP-25/9C-G	DB25 to DB9 adapter cover, gray
DP-25CR	Gray plastic hood with 45 degree cable exit
DP-9JBC	DB9 jumper box cover, black
DP-9JBC-G	DB9 jumper box cover, gray
DP-25JBC	DB25 jumper box cover, black
DP-25JBC-G	DB25 jumper box cover, gray



COAX & TWINAX BALUNS



Mfr. No.	Fig.	Coax Connector	Modular Jack		Wiring Type
			Style	Signal/Ground	
DC-1A-34	1	BNC male	RJ11	3:4	IBM
DC-1ATH-34†	1	BNC male	RJ11	3:4	NOVELL
DC-1A-43G	1	BNC male	RJ11	4:3	IBM
DC-1A45-45	2	BNC male	RJ45	4:5	IBM
DC-1A-25	1	BNC male	RJ11	2:5	ROLM
DC-1AM-34	3	BNC male	RJ11**	3:4	IBM
DC-1AS	4	BNC male	None*	None*	....
DC-1A-DEC	....	BNC male	DEC	1:3	DEC
DC-1AP-34	....	BNC male with "Pigtal"	RJ11	3:4	IBM
DC-1ASP-34†	1	BNC male, Super Balun	RJ11	3:4	IBM
DC-1B-34	5	BNC female	RJ11	3:4	IBM
DC-1C-25	6	Twinax male	RJ11	2:5	ROLM
DC-1C-34	6	Twinax male	RJ11	3:4	IBM
DC-1C45-45	6	Twinax male	RJ45	4:5	IBM
DC-1CP-34	....	Twinax male	RJ11	3:4	IBM
DCJ-1CSP-34†	6	Twinax male, Super Balun	RJ11	3:4	IBM
DC-IIA	7	BNC&TNC female	RJ11	2,3,4,5	NWS
DC-IIAP	8	BNC&TNC male, w/"Pigtal"	RJ11	2,3,4,5	NWS

All balun with both screw tap and modular jack unless otherwise noted.

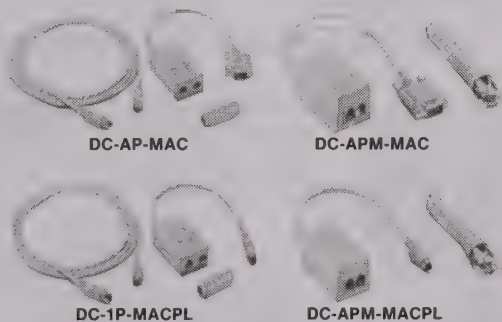
* = Screw tap only

** = Modular Jack only

† = Characteristic impedance on coax side : 50Ω

‡ = Super Balun transmission distance of up to 2400 ft. (700m)

NETWORKING KIT



- Apple Talk® or Apple Phonet® compatible kit
- Additional mini DIN cable, modular cable and mini DIN adapter are available.

Apple Talk® Compatible System Kit

DC-AP-MAC DB9 connector & mini DIN 3 ports

DC-AP-MACPL Mini DIN 8 connector & mini DIN 3 ports

Apple Phonet® Compatible System Kit

DC-APM-MAC DB9 connector & modular jack (RJ11) ports

DC-APM-MACPL Mini DIN 8 connector & modular jack (RJ11) ports

COAX MULTIPLEXER

- Cable total length not exceed 5000 ft. (1500m)
- Use RG62/U 93 ohm coax cable
- 2 ports on IBM3274

DC-3A

DC-3A
DC-3A-1

Panel mount type

ARCNET PASSIVE HUB

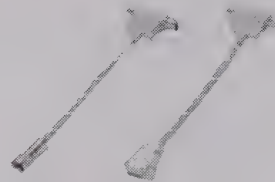
- Use as the center of the star configuration in arcnets
- Wall mount passive hub available with a set of mounting screws and a 93Ω terminator

DC-10A-1

DC-10A-1
DC-10A-2
BNC-3063
BNC-3063-1
BNC-3063-2

Wall mount unit
Compact unit, molded, black
93Ω Terminator 1/2W, 5%
93Ω Terminator 1/2W, 1%
93Ω Terminator 1/2W, 1% w/grounding chain

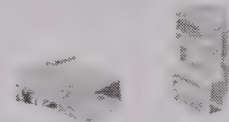
TWINAX STRAP & T ASSEMBLIES



DC-TA707A DC-TA709A/9

DC-TA707A/CO Twinax device connection, color monitor
DC-TA707A/MONO Twinax device connection, monochrome monitor
DC-TA709A/15 DB15 device connection
DC-TA709A/9 DB9 device connection

FOR STRAND FLAT CABLE



PT-008

PT-044

PT-064

PT-066

PT-066DEC

PT-088

PT-088K

PT-1010

PT-1010K

RJ22 4P4C handset plug

RJ11 6P4C

RJ11 6P6C

DEC type, offset clip plug

RJ45 8P8C

RJ45 8P8C w/key

10P10C, 10 position

10P10C, 10 position w/key

FOR ROUND CABLE, STRANDED CONDUCTOR



PT-088R

For Twisted Pair Stranded, Round Cable

PT-044R

PT-064R

PT-066R

PT-088R

PT-088KR

RJ22 4P4C for twisted pair cable

RJ11 6P4C for twisted pair cable

RJ11 6P6C for twisted pair cable

RJ45 8P8C for twisted pair cable

8P8C keyed for twisted pair cable

FOR ROUND CABLE, SOLID CONDUCTOR

For Twisted Pair Solid, Round Cable

PT-064RS

PT-066RS

PT-088RS

PT-088KRS

PT-066DRS

RJ11 6P4C for solid cable

RJ11 6P6C for solid cable

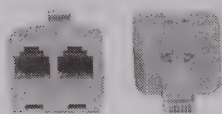
RJ45 8P8C for solid cable

RJ45 8P8C keyed for solid cable

DEC type for solid cable



MODULAR DUPLEX ADAPTERS



- Gold plated contacts
- Wired straight thru

PT-101-666

Plug to Jack

PT-101-444
PT-101-448
PT-101-666
PT-101-888

Jack to Jack

PT-101J-444
PT-101J-448
PT-101J-666
PT-101J-888

MOUNTING BLOCKS, SNAP ON TOP



PT-108A-6C

- Single jack, snap cover
- Ivory color, all w/double sided sticker and screw for mounting
- Gold plated contacts. Both UL Listed and standard parts available
- Wiring:
6P4C & 6P6C - USOC
8P8C - AT&T

Standard

PT-108A-4C
PT-108A-6C
PT-108A-6DEC
PT-108A-8C
PT-108A-8CSB

RJ11, 4C USOC
RJ11, 6C USOC
DEC Type Jack
RJ45 Regular AT&T
RJ31SX, with shorting bar

UL Listed

PT-108A-4C-UL
PT-108A-6C-UL
PT-108A-6DEC-UL
PT-108A-8C-UL

RJ11, 4C USOC
RJ11, 6C USOC
DEC Type Jack
RJ45 Regular AT&T

MODULAR IN-LINE COUPLERS



- Gold plated contacts
- Wired either straight thru or cross over

PT-102-6C

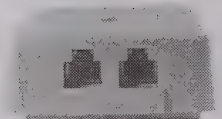
Reverse Wiring

PT-102-4C
PT-102-6C
PT-102-8C

Straight Through (For Data)

DC-102-4CD
DC-102-6CD
DC-102-8CD
DC-102-10CD

MOUNTING BLOCK, DOUBLE JACK (SCREW TERMINAL)



PT-1104A-66

PT-1104A-44
PT-1104A-66
PT-1104A-88

- Dual jacks screw on cover
- Ivory color, all w/double sided sticker and screw for mounting
- Gold plated contacts screw on terminal
- Wiring:
6P4C & 6P6C - USOC
8P8C - AT&T

RJ11, 4C
RJ11, 6C
RJ45, Regular

MOUNTING BLOCK, SINGLE JACK (110 IDC TYPE)



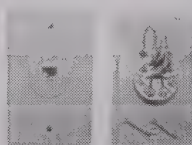
PT-1103-6C

PT-1103-4C
PT-1103-6C
PT-1103-6DEC
PT-1103-8C
PT-1103-8CK

- Single jack, screw on cover
- Ivory color, all w/double sided sticker and screw for mounting
- Gold plated contacts. 110 Type IDC Termination with 2 pair caps
- Wiring:
6P4C & 6P6C - USOC
8P8C - AT&T

RJ11, 4C
RJ11, 6C
DEC Type Jack
RJ45, Regular
RJ45, Keyed

SINGLE JACK WALL PLATE



PT-103-8C

PT-103-4C
PT-103-6C
PT-103-6DEC
PT-103-8C
PT-103-8CK
PT-103-10CK

- Single jack plastic wall plate single gang
- Ivory color, screw terminal, gold plated contact
- Wiring:
6P4C & 6P6C - USOC
8P8C - AT&T

Modular 1 jack wall plate 6P4C
Modular 1 jack wall plate 6P6C
Modular 1 jack wall plate DEC Type
Modular 1 jack wall plate 8P8C
Modular 1 jack wall plate 8P8C w/key
Modular 1 jack wall plate 10P10C w/key

MOUNTING BLOCK, DOUBLE JACK (110 IDC TYPE)



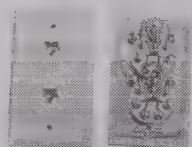
PT-1104B-88

PT-1104B-44
PT-1104B-66
PT-1104B-88
PT-1104B-88K
PT-1104B-8KK
PT-1104B-6DEC

- Double jack, screw on cover
- Ivory color, all w/double sided sticker and screw for mounting
- Gold plated contacts, 110 Type IDC Termination with pair caps
- Wiring:
6P4C & 6P6C - USOC
8P8C - AT&T

RJ11, 4C
RJ11, 6C
RJ45, Regular
RJ45, w/one keyed port
RJ45, w/dual keyed port
DEC Type jack

MODULAR DUAL JACK WALL PLATES



PT-104-8K8K

PT-104-44
PT-104-66
PT-104-66DEC
PT-104-88
PT-104-8K8K
PT-104-10CK

- Double jack plastic wall plate single gang
- Ivory color, screw terminal, gold plated contact
- Wiring:
6P4C & 6P6C - USOC
8P8C - AT&T

Modular 2 jack wall plate 6P4C
Modular 2 jack wall plate 6P6C
Modular 2 jack wall plate DEC Type
Modular 2 jack wall plate 8P8C
Modular 2 jack wall plate w/key
Modular 2 jack wall plate 10P10C w/key

CALL US FOR YOUR SPECIAL ORDER NEEDS ON CABLE ASSEMBLIES.



IBM® COMPATIBLE PRINTER CABLES

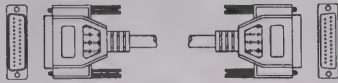


RS232 Male
to Centronic Male

S-36M25M-2'
S-36M25M-6'
S-36M25M-10'
S-36M25M-25'
S-36M25M-50'
S-36M25M-100'
S-36M25M-6R
S-36M25M

- RS232 25 Pin male to Centronic 36 pin male
- Molded w/ thumb screw
- Full length Mylar® foil shield
- 25 Wires; 26 AWG Stranded conductors
- Ground indented D-SUB connectors

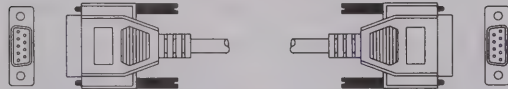
RS232 CABLES (SERIAL)



S-25MM

- RS232 Dual 25 Pin or 9 Pin
- Molded w/ thumb screw
- Full length Mylar® foil shield
- Fully wired straight thru, 26 AWG stranded conductors
- For PC serial port and/or RS232 type applications
- Ground indent D-SUB connectors

25 Pin Male to Female	25 Pin Male to Male	25 Pin Female to Female
S-25MF-2'	S-25MM-2'	S-25FF-6'
S-25MF-6'	S-25MM-6'	S-25FF-10'
S-25MF-10'	S-25MM-10'	S-25FF-25'
S-25MF-25'	S-25MM-25'	S-25FF-50'
S-25MF-50'	S-25MM-50'	
S-25MF-100'	S-25MM-100'	



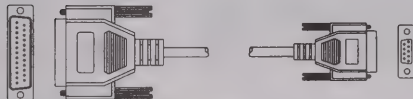
9 Pin Male to Male

S-9MM-6'
S-9MM-10'
S-9MM-25'

9 Pin Male to Female

S-9MF-6'
S-9MF-10'
S-9MF-25'

AT SERIAL ADAPTER CABLES



S-25M9F

- RS232 25 pin to 9 pin
- Adapt serial port to RS232 devices, i.e. modems, printers
- Molded w/thumb screws
- 9 Wires; 26 AWG stranded conductors
- Full length Mylar® foil shielded

25 Pin Male to 9 Pin Female	25 Pin Male to 9 Pin Male
S-25M9F-1'	S-25M9M-6'
S-25M9F-6'	S-25M9M-10'
S-25M9F-10'	S-25M9M-25'
S-25M9F-25'	

CENTRONIC CABLES (PARALLEL)



S-36MM

- Centronic 36 pin connector
- Full 36 conductors; wired straight through
- 26 AWG stranded conductors
- Molded, Mylar® foil shielded cable

Male to Male

Male to Female

S-36MM-6'
S-36MM-12'

S-36MF-6'
S-36MF-10'

VGA MONITOR CABLES



S-H15MF

- High density 15 pin connectors
- Full 15 conductors; wired straight through
- 26 AWG stranded conductors; Mylar® foil shielded cable
- Molded w/thumb screw
- VGA monitor extension and adapter cable

Male to Female

DB9 to 15 Pin

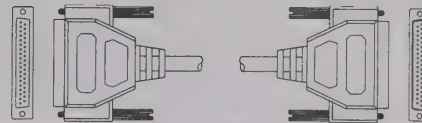
Male to Male

S-H15MF-6'
S-H15MF-10'
S-H15MF-25'

S-9F15HM-6'
S-9M15HM-6'
S-9F15HF-6'
S-9M15HF-6'

S-H15MM-6'
S-H15MM-10'

OTHER D-SUB CABLE

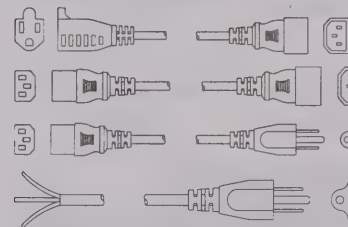


S-37MF

- 26 AWG stranded conductor
- Full length Mylar® foil shield
- D-SUB plugs w/grounding indents
- Molded w/thumb screw

S-15MF-6' 15 Pin male to female extension cable
S-15MF-10' 15 Pin male to female extension cable
S-37MF-10' 37 Pin male to female extension cable
S-37MM-10' 37 Pin male to male cable
S-RGB-3' RGB color monitor cable

PC POWER CORDS



S-PWR/F-3'

S-EST-6'

S-PWR-6'

SPSC-6'

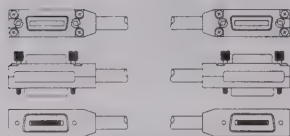
- All UL, CSC listed cables
- Choice of gray or black

S-PWR/F-3' Monitor to computer power adapter cord
S-EXT-6' BK Computer power extension black
S-EXT-6' G Computer power extension gray
S-PWR-6' BK Computer power cord, black
S-PWR-6' G Computer power cord, gray
S-PSC-6' BK Power cord w/stripped end, black
S-PSC-6' G Power cord w/stripped end, gray

THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS
WE HAVE AVAILABLE. PLEASE
CONTACT US FOR ADDITIONAL PRODUCT INFORMATION.



IEEE-488 CABLES



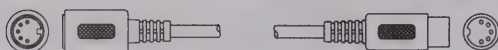
S-IEEE

- S-IEEE-488-1 GRIB-IEEE-488 cable 1 meter (apprx 3 ft.)
- S-IEEE-488-2 GRIB-IEEE-488 cable 2 meter (apprx 6 ft.)
- S-IEEE-488-3 GRIB-IEEE-488 cable 3 meter (apprx 10 ft.)
- S-IEEE-488-5 GRIB-IEEE-488 cable 5 meter (apprx 15 ft.)

- Double shielded, twisted pair low noise cable
- Gold plated conductors

KEYBOARD & MOUSE CABLES

S-SDK-6



S-6MDM



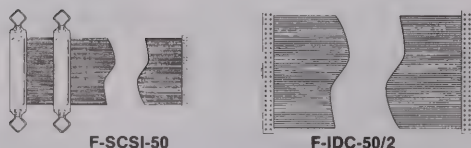
- Mini DIN 6 pin
- AT, PS-2 type keyboard or mouse extension cable
- Molded shielded, 26 AWG conductors wired straight through
- S-5KD-6' Male to female coiled, black keyboard extension cable
- S-5DMF-6'G Male to female gray keyboard extension cable, 6 ft.
- S-5DMF-10'G Male to female gray keyboard extension cable, 10 ft.
- S-PS-2-6' AT keyboard to PS-2 adapter cord, 6 inch
- S-ATK-6' PS-2 keyboard to AT adapter cord, 6 inch
- S-6MDM-6' 6 Pin mini DIN male to male, 6 ft.
- S-6MDM-10' 6 Pin mini DIN male to male, 10 ft.
- S-6MDM/F-6' 6 Pin mini DIN male to female, 6 ft.
- S-6MDM/F-10' 6 Pin mini DIN male to female, 10 ft.

MAC DIN CABLES



- Mini DIN 8 pin apple
- Regular wiring for printing applications: ST wiring, wired pin to pin, for switch box application. (See Below)
- Molded, shielded, 26 AWG conductors
- Straight thru pin diagram
- S-4MDM-10' 4 Pin mini DIN male to male, 10 ft.
- S-4MDM/F-10' 4 Pin mini DIN male to female, 10 ft.
- S-8MDM-6' 8 Pin mini DIN male to male, 6 ft.
- S-8MDM-10' 8 Pin mini DIN male to male, 10 ft.
- S-8MDM-6' ST 8 Pin mini DIN male to male straight thru 6 ft.
- S-8MDM-10' ST 8 Pin mini DIN male to male straight thru 10 ft.
- S-25MD8-10' DB25 male to mini DIN 8 pin male, 10 ft.
- S-25MD8-10'-MH Macintosh to Hayes and compatible modem cable
- S-25MD8-10'-LZ Macintosh to HP & compatible laser printer serial cable
- S-25MD8-10'-SI Apple II, IIe, II+ to image writer cable

INTERNAL DATA CABLES



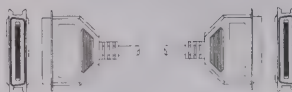
Internal Data Cable

- F-SCSI-50 2 Centronic 50 pin female to IDC socket 50 pin male
- F-IDC-50/2 2 IDC socket 50 pin
- F-IDC-50/3 3 IDC socket 50 pin

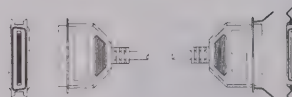
SCSI CABLES



System Cable



Peripheral Cable



- The prevalent device interconnect on Apple's® computers. Allow peripherals to be daisy chained together
- System Cable - connects computer to the first peripheral in the daisy chain.

- Peripheral Cable - connect together peripherals within the daisy chain
- Extension Cable - extending the length of existing system or peripheral cable.

Extension Cable

System Cable

- S-50M25M-18' SCSI Cable 18" DB25/M to Centronic 50 male
- S-50M25M-3' CSI Cable 3 ft. DB25/M to Centronic 50 male
- S-50M25M-6' CSI Cable 6 ft. DB25/M to Centronic 50 male
- S-50M25M-10' CSI Cable 10 ft. DB25/M to Centronic 50 male

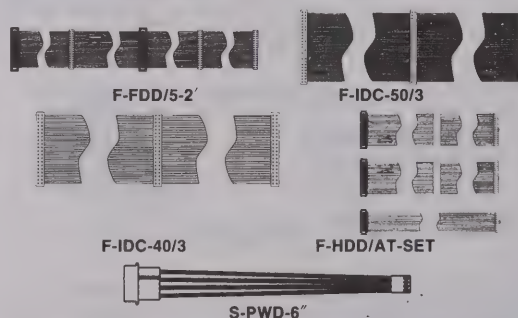
Peripheral Cable

- S-C50MM-18' SCSI Peripheral cable 18" Centronic 50 male to male
- S-C50MM-3' SCSI Peripheral cable 3 ft. Centronic 50 male to male
- S-C50MM-6' SCSI Peripheral cable 6 ft. Centronic 50 male to male
- S-C50MM-10' SCSI Peripheral cable 10 ft. Centronic 50 male to male

Extension Cable

- S-C50MF-3' SCSI Extension cable 3 ft. Centronic 50 male to female
- S-C50MF-6' SCSI Extension cable 6 ft. Centronic 50 male to female
- S-C50MF-10' SCSI Extension cable 10 ft. Centronic 50 male to female

PC INTERNAL CABLE ASSEMBLIES



Floppy Disk Drive Cable

- F-FDD-2' Dual drive system, 34 pin card edge only, 5 1/4" drive
- F-FDD/5-2' Dual drive system, 34 pin card edge & IDC socket for both 5 1/4" & 3 1/2" drive

Hard Disk Drive Cable

- F-IDC-40/2 IDE HDD cable, single drive, two IDC40 socket, 19"
- F-IDC-40/3 IDE HDD cable, dual drive, three IDC40 socket, 2'
- F-IDC-50/2 SCSI HDD cable, single drive, two IDC50 socket, 19"
- F-IDC-50/3 SCSI HDD cable, dual drive, three IDC50 socket, 2'
- F-HDD/AT-SET AT-Compatible hard drive cable set
- F-HDD/XT-18" XT-Compatible hard drive cable set
- F-E20D-2' HDD cable, data, 20 pin edge card connector
- F-E34D-2' HDD cable, data, 34 pin edge card connector

I/O Control Cable

- F-I/OA-2' 34 Pin, twist on EC at 25 to 29 pin
- F-I/OB-2' 34 Pin, twist on EC at 10 to 16 pin

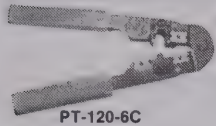
Power Cable

- S-Y-CABLE Computer internal Y-power cord
- S-PWD-6" 3 1/2" FDD power adapter cable
- S-CORD-10" Computer internal power cable



MODULAR CRIMPING TOOL

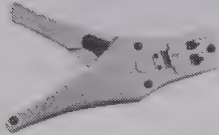
Metal w/Cutter



PT-120-6C

PT-120-4C For handset plug
PT-120-6C For RJ11, 4C & 6C plug
PT-120-6DEC For DEC type plug
PT-120-8C For RJ45 plug
PT-120-10C For 10C plug

Deluxe, Plastic



PT-112-6/4 For both handset and RJ11 plugs

Economic, Plastic, w/Cutter



PT-110-6P4C

PT-110-4P4C For handset plug
PT-110-6P4C For RJ11, 4C plug
PT-110-6P6C For RJ11, 6C plug

ADAPTERS & DEVICES



AD-D25WA



AD-D25MT



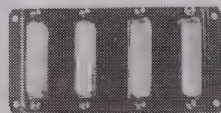
AD-D25LP



AD-D25QT



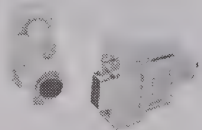
AD-D25SP



AD-D25UGC



AD-D25M36M



AD-D9F/MD6F



AD-D9F/MD8M

AD-D25PB Mini patch box (solder type, single use)
AD-D25WA Mini wiring adapter (re-configurable)
AD-D25MT Mini tester
AD-D25LP Loop back tester (4 LEDs)
AD-D25QT Quick tester (18 LEDs)
AD-D9SP Surge protector for DB9 port
AD-D25SP Surge protector for DB25 port
AD-D25UGC Universal gender changer
AD-D25M36M DB25 male, parallel adapter
AD-D25F36M DB25 female, parallel adapter
AD-D9M-RCA/F DB9 to RCA female adapter
AD-D9F/MD6F DB9 female to mini DIN 6 pin female adapter
AD-D9F/MD8F DB9 female to mini DIN 8 pin female adapter
AD-D9F/MD8M DB9 female to mini DIN 8 pin male adapter

HIGH DENSITY GENDER CHANGERS & VGA ADAPTERS



- Molded & shielded
- High density 15 pin gender changers
- DB9 to DH15 used as PS/2 to VGA monitor adapter

AD-DH15FF

High Density Gender Changer

AD-DH15FF

AD-DH15MM

PS/2 VGA Adapters

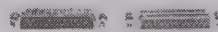
AD-D9F15HF

AD-D9F15HM

AD-D9M15HF

AD-D9M15HM

LOW PROFILE GENDER CHANGERS



AD-LGC-25MM

AD-LGC-25FF

- Metal construction, fully shielded
- Hex spacer included, ensures tight connection

D-Sub Type

Male to Male

AD-LGC-9MM DB9
AD-LGC-15MM DB15
AD-LGC-25MM DB25
AD-LGC-37MM DB37

Female to Female

AD-LGC-9FF DB9
AD-LGC-15FF DB15
AD-LGC-25FF DB25
AD-LGC-37FF DB37

Centronic Type

AD-LGC-36MM Centronics 36 male to male
AD-LGC-50MM Centronics 50 male to male
AD-LGC-36FF Centronics 36 female to female
AD-LGC-50FF Centronics 50 female to female

Port Protector

AD-LGC-9MF
AD-LGC-15MF
AD-LGC-25MF
AD-LGC-37MF

Helps to cut down the wear & tear of Computer Port Connectors

AT SERIAL PORT ADAPTERS



AD-D25F9F-A

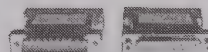
Black, Molded Plastic

AD-D25F9F
AD-D25F9M
AD-D25M9F
AD-D25M9M

Gray, Molded w/Thumb Screw

AD-D25F9F-A
AD-D25F9M-A
AD-D25M9F-A
AD-D25M9M-A

GENDER CHANGERS



AD-D25MM AD-D25FF

- Molded and shielded
- Hex spacer and/or thumb screw included, ensure tight connection

Modeled Type, Black

Male to Male Changer

AD-D9MM DB9
AD-D15MM DB15
AD-D25MM DB25
AD-D37MM DB37

Female to Female Changer

AD-D9FF DB9
AD-D15FF DB15
AD-D25FF DB25
AD-D37FF DB37

Centronic Type

AD-D36MM Centronic 36 male to male changer
AD-D36FF Centronic 36 female to female changer

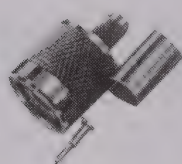
"A" Molded Type, Beige

AD-D25FF-A DB5 female to female changer
AD-D25MM-A DB25 male to male changer

CALL US FOR YOUR SPECIAL ORDER NEEDS ON CABLE ASSEMBLIES.



TNC CRIMP PLUGS



- All pre-packed three piece set.
- All machined type connector, brass w/ nickel over plate.
- Gold plated contact pin.

TNC-3421	For RG59/U, 62/U Cable
TNC-3422	For RG58/U Cable
TNC-3422-C	For RU58C/U, 58A/U Cable
TNC-3423	For RG6/U
TNC-3424	For Plenum RG59/U Cable
TNC-3425	For Plenum RG58/U Cable
TNC-3426	For Belden 8281
TNC-3427	For Belden 8218
TNC-3428	For RG174

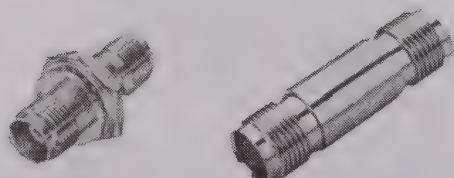
TNC TWIST-ON PLUGS



- All pre-packed 1 piece in individual poly bags
- Machined type connector, brass with nickel over plate
- Gold plated contact pins, wire captive sockets.

TNC-3431	For RG59/U 62/U Cable
TNC-3432	For RG58/U Cable
TNC-3433	For RG6/U
TNC-3434	For Plenum RG59/U Cable
TNC-3435	For Plenum RG58/U Cable
TNC-3436	For Belden 8281

TNC ADAPTERS



TNC-3461	TNC F-F Bulkhead Adapter
TNC-3462	TNC F-F Adapter

TWINAX CONNECTORS



TWX-3501	Standard Clamp Plug
TWX-7507	For Teflon®
TWX-3502	Female to Female Bulkhead Adapter
TWX-3503	F-F Adapter
TWX-3504	Bulkhead Receptacle Jack
TWX-7506	Crimp-Type Plug
TWX-3505	Standard Clamp Jack

BNC WEDGE COMPRESSION PLUG



BNC-3051	For RG59/U, 62/U Cable
BNC-3052	For RG58/U Cable

BNC CONNECTORS

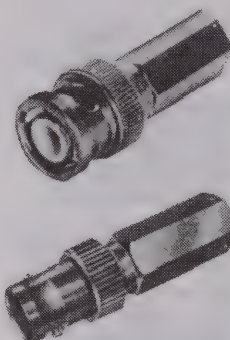
DUAL CRIMP TYPE



- All pre-packed three piece set, in individual bags.
- All machined type brass with nickel over plate connectors except BNC38xx - 78xx Series with die cast caps
- Gold plated contact pins.

BNC-3021	For RG59/U, 62/U Cable (UG-1789/U)
BNC-3021-1.1	For RG59/U 62/U Cable (UG-1789/U), with 1.1 mm Pin
BNC-3821	For RG59/U, 62/U Cable, Die Cast Type
BNC-3022	For RG58/U Cable (UG-1785/U)
BNC-3022-C	For RG58C/U, 58A/U 58/U Thinnest Cable (UG-1785U)
BNC-3022TH	For RG58 Thinnest PlenumCable
BNC-7022-A	For RG58A/U Cable
BNC-3822	For RG58/U Cable (UG-1785/U), Die Cast Type
BNC-7822-A	For RG58A/U Cable, Die Cast Type
BNC-3023	For RG6/U Cable
BNC-3823	For RG6/U Cable, Die Cast Type
BNC-3024	For Plenum RG59/U Cable
BNC-3824	For Plenum RG59/U Cable, Die Cast Type
BNC-3025	For Plenum RG58/U Cable
BNC-3825	For Plenum RG58/U Cable, Die Cast Type
BNC-3026	For Belden 8281 Cable
BNC-3027	For Belden 8218 Cable
BNC-3028	For RG174/U
BNC-3029-8X	For RG-8X Mini 8
BNC-3029-179	For RG-179/U

BNC TWIST-ON TYPE CONNECTORS



BNC-3031	For RG59/U, 62/U Cable
BNC-3032	For RG58/U Cable
BNC-3033	For RG6/U Cable
BNC-3034	For Plenum RG59/U Cable
BNC-3035	For Plenum RG58/U Cable
BNC-3036	For Belden 8281
BNC-3131	For RG59/U, 62/U Cable
BNC-3132	For RG58/U Cable
BNC-3133	For RG6/U
BNC-3134	For Plenum RG59/U Cable
BNC-3135	For Plenum RG58/U Cable
BNC-7136	For Belden 8281 Cable

BNC SOLDER PLUG-STANDARD TYPE

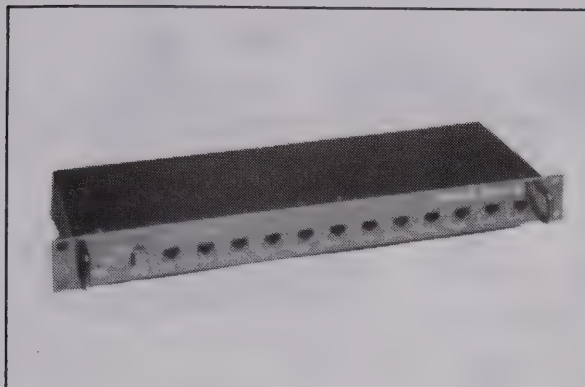


BNC-3011	For RG59/U, 62/U Cable (UG-260/U), 6 pc.
BNC-3012	For RG58/U Cable (UG-88/U), 6 pc.

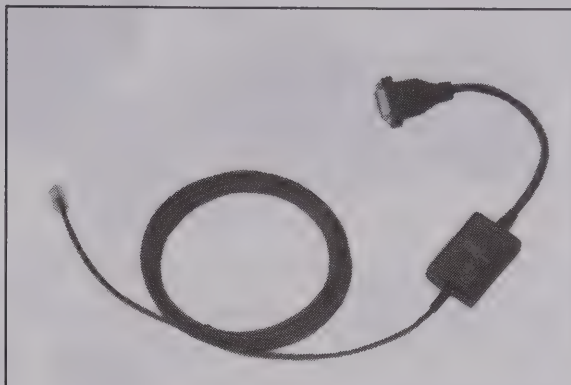
BNC CHASSIS MOUNTS & ADAPTERS



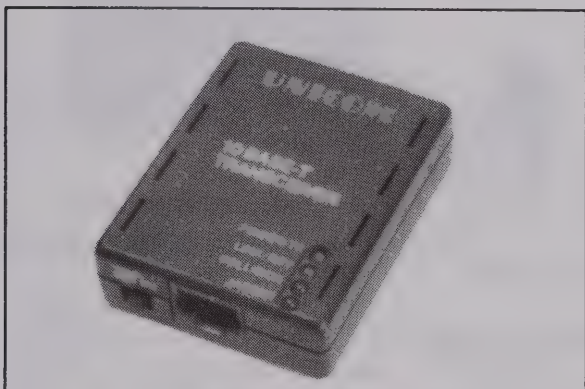
BNC-3104	Bulkhead Dual Crimp Jack For RG59/U, 62/U Cable
BNC-3105	Bulkhead Dual Crimp Jack For RG58/U Cable
BNC-3306	M-F Right Angle UG-306A/U
BNC-3374	Jack-Plug-Jack UG-274B/U, F-M-F
BNC-3874	Jack-Plug-Jack UG-274B/U, Die Cast Type
BNC-3375	Jack-Jack-Jack Adapter, F-F-F
BNC-3314	Jack-Jack UG-914/U, F-F



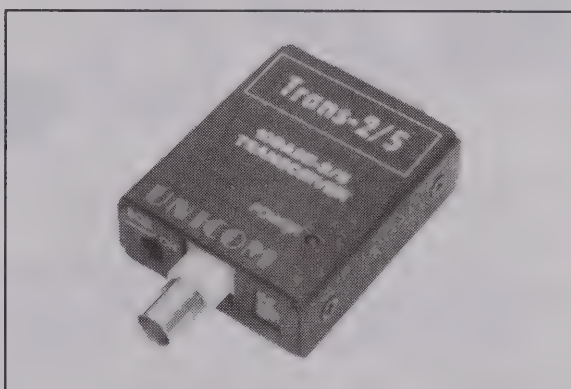
ETP-20012T



ETP-20028T-2



ETP-20028T



ETP-20048T

Ethernet Hub & Transceivers

12 Port 10Base-T Hub

This hub features 12 RJ-45 station ports, 1 BNC port, 1 AUI port; and also provides Power, Coax, AUI Port, Reset, Station LED lights to indicate port connect status as well as a Built-in data collision and jabber handling function. Designed to meet IEEE 802.3 repeater specification and 10BASE-T/2/5 Standards.

P/N# ETP-20012T (12 Port Hub)

Mini 10Base-T Transceiver

Small, lightweight transceiver converts existing Thick Ethernet interface card to 10Base-T application and features AUI and RJ-45 connections as well as a selectable SQE test switch. Designed to meet IEEE 802.3 10Base-T/5 Standards.

P/N# ETP-20028T (Mini Size)

Trans-One Transceiver (Double Pigtail Transceiver)

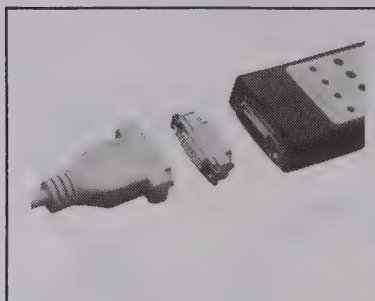
You will save dollars, inventory and problems of incompatible transceivers and attachment cables. Integral cable provides optimum connectivity and reduces cable losses and features a 10Base-T Transceiver, 6" AUI cable and 15 feet patch cable all-in-one. Conforms to IEEE 802.3 10Base-T/5 Standards.

P/N# ETP-20028T-2 (Double Pigtail)

Trans-2/5 Transceiver

This transceiver simply converts existing Thick Ethernet interface card to a suitable form for transmission over Thin Ethernet coaxial cable to each workstation. The transceiver provides a selectable SQE switch, a LED light for power indicator, a flexible 3 position terminator switch for Thin Ethernet. Conforms to IEEE 802.3 10Base-2/5 Standards.

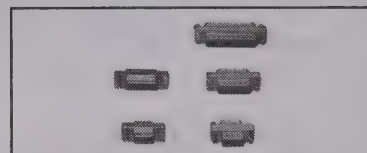
P/N# ETP-20048T (Mini Size)



GC-15MF-LP-ET-2

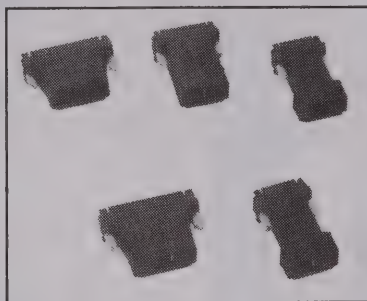


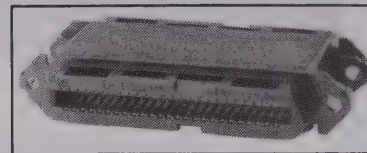
UEI-43000


GC-9FF-LP
GC-9MM-LP

GC-25FF-LP
GC-25MM-LP


GC-15MF-LP-ET-1


DBM-45F
DBM-45M

DBM-25F
DBM-25M


GC-50FF

GC-50MM


BM-11M-CP-R
BM-45M-CP-R

TM-11M-CP-R
TM-45M-CP-R

Ethernet Connector Saver

Protect your investment... Ethernet AUI connectors are normally mounted directly on internal circuit board and therefore, are very difficult and costly to replace. Don't risk it, protect your investment at a fraction of the cost.

P/N# GC-15MF-LP-ET-2
(Ethernet AUI)

Hexnut to Slide Latch Adapter

Do you have a transceiver drop cable (locking posts) that won't hook up with your card adapter (hexnut)? We have the solution for you. This 1/4" long, low profile, metalizer adapter will correct incompatibility problem, plus the slide latch will lock the cable in place to prevent loose pin contact.

P/N# GC-15MF-LP-ET-1
(Hexnut to Slide Latch)

3COM Adapter Bracket, 10 Per Bag

Is your 3COM™ Ethernet Card not compatible with your standard transceiver drop cable mounting hardware? Well, we have the solution for you.

The Adapter Bracket simply slides onto the screw ports of the AUI connector of the cable and converts your connections to a 4/40 screw, which enables you to connect to a fixed female screw lock on the card.

P/N# UEI-43000
(3COM Bracket)

D-Sub Adapters

D-Sub Adapters are available in 6 colors with 5 color caps for thumb screws, a total of 36 color combinations for RS-232 application. These ultra slim D-Sub adapters with 25 Pin to RJ-12, RJ-45 are available in kit form.

P/N# DBM-45F (DB25 F to RJ-45),
DBM-45M (DB25 M to RJ-45),
DBM-25F (DB25 F to RJ-12),
DBM-25M (DB25 M to RJ-12)
(F=Female, M=Male)

Gender Changer Low Profile & Telco 50 Pin

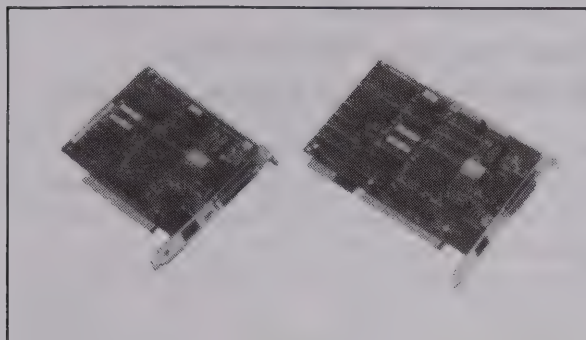
Low profile changers are available in DB9, DB25 and Telco connectors. The D-Sub connectors of the same gender, male-to-male and female-to-female are available. The Telco 50-pin model is a low profile gender changer with a plastic enclosure. Available in male-to-male, and female-to-female connections.

P/N# GC-9FF-LP, GC-9MM-LP,
(DB9 Low Profile, FF or MM)
GC-25FF-LP, GC-25MM-LP,
(DB25 Low Profile, FF or MM)
GC-50FF, GC-50MM
(Telco 50 Pin FF or MM)
(F=Female M=Male)

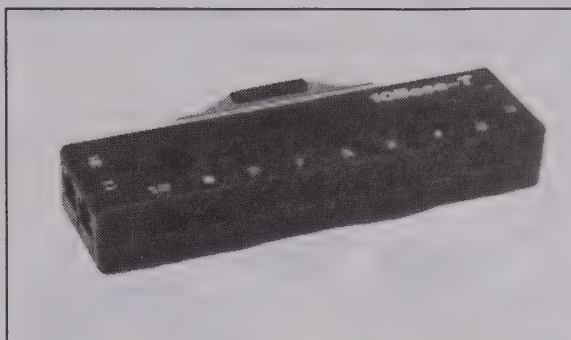
BNC & Twinaxial Baluns

Compact size BNC Baluns are designed to convert the RG-62 coaxial cable to utilize UTP cable in an IBM 3270 system environment. It features a male BNC connector and a RJ-11 or RJ-45 Jack. The Twinaxial Baluns convert 100 ohm Twinaxial cable to utilize UTP cable in a 3X/AS400 system.

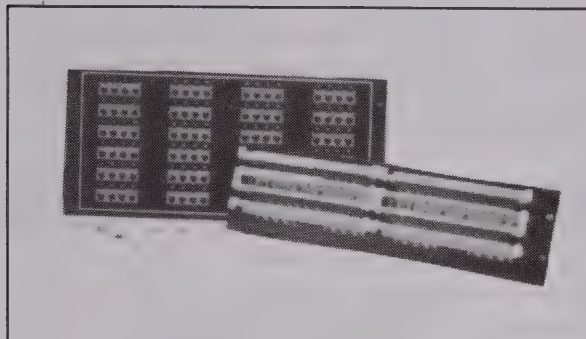
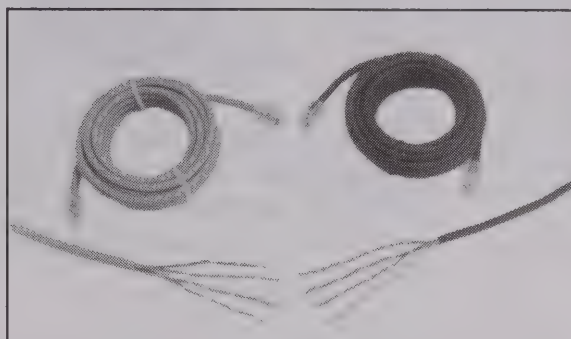
P/N# BM-11M-CP-R (RJ-11)
BM-45M-CP-R (RJ-45)
TM-11M-CP-R (RJ-11)
TM-45M-CP-R (RJ-45)



ETP-4102-E



CMJ-812M-10T or CMJ-812F-10T


 PATCH-848-110
PATCH-848-110T

 EDD-C403-GY-10T EDD-C414-GY-10T
EDD-C407-GY-10T EDD-C425-GY-10T

10Base-T, 16 Bit Network Interface Card

It complies fully with IEEE 802.3 10Base-5 and 10Base-T standard. Uniquely designed using the National Semiconductor Corp. chip set. Any driver written for Novell's NE2000 can be directly used with this 10Base-T, 16 Bit Network Interface Card which is an add-in card for the IBM PC/AT/386/486 and compatible PC's.

P/N# ETP-4102-E (16 Bit Card)

48 Port, 110 Type, AT&T 258A

Wiring, Patch Panel

The 48 Port, 110 Type, AT&T 258A Wiring Patch Panel is designed to connect cable directly to 110-type quick connect blocks on the rear of the patch panel. Reduced connection points save wiring insertion loss. Features AT&T 110 Type connectors and RJ-45 Jacks. Meets EIA/TIA TSB-40 Category 4 Standards.

P/N# Patch-848-110 (48 Port)

48 Port, 110 Type, 10Base-T Patch Panel

The 48 Port, 110 Type 10Base-T Patch Panel is pre-wired to meet 10Base-T wiring standards. Modular jack with return slots to separate each pin preventing possible short circuit. Features a 110 Type connectors and RJ-45 jacks, pins 1, 2, 3, & 6 active. Meets EIA/TIA TSB-40 Category 4 Standards.

P/N# Patch-848-110T (48 Port)

Harmonica Splitter, Female or Male 12 Port, 10 Base-T

The Harmonica Splitter is now available for 10Base-T application and meet EIA/TIA/ TSB-40 Category 3 Standards. This Harmonica Splitter uses 94VO fire retardant plastic that meets NEC fire code. It has RJ-45 jacks designed with pin guide slot, the captive pin provides proper pin separation and eliminates the possibility of short circuiting. It features a Telco 50 pin connector and RJ-45 jacks, 10Base-T wiring and pin 1, 2, 3, & 6 active.

P/N# CMJ-812M-10T (Male)

CMJ-812F-10T (Female)

Patch Cord, 3', 7', 14', or 25' Gray, 2 Pair, Level 4, 24 AWG, Stranded, 10Base-T

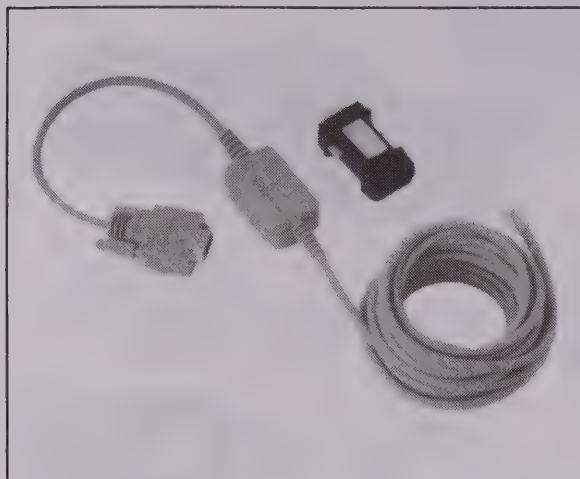
Designed and tested for attenuation and NEXT (Near End Cross-Talk) to meet EIA/TIA TSB-36 Category 4 Standards. The flexibility makes it ideal for patching panels or workstation terminations. It features stranded level 4 cable, 24 AWG., 10Base-T Wiring, pins 1, 2, 3 & 6 active. Standard lengths in stock available in 3, 7, 14, 25 ft. in gray color.

P/N# EDD-C403-GY-10T (3ft.)

EDD-C407-GY-10T (7ft.)

EDD-C414-GY-10T(14ft.)

EDD-C425-GY-10T(25ft.)



DEP-RJ45-MFTR
DEP-RJ45-MFTR-CP

**THIS IS ONLY A PARTIAL LISTING OF
THE PRODUCTS WE HAVE AVAILABLE.
PLEASE CONTACT US FOR ADDITIONAL
PRODUCT INFORMATION.**

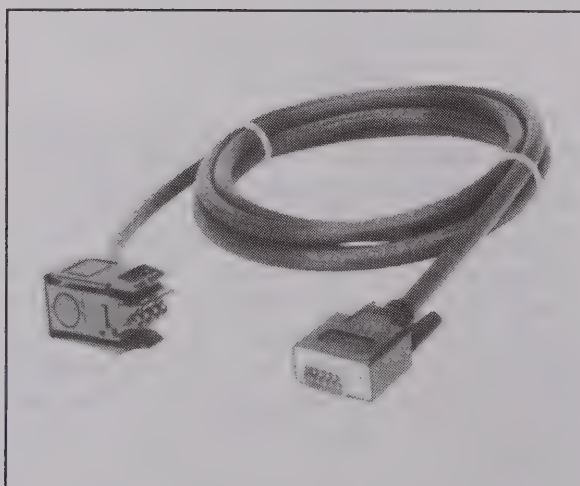
Token Ring Type 3 Media Filter (Double Pigtail Style & Compact Style)

The Type 3 Media Filter is used when attaching a PC with Type 1 Token Ring Network Interface Card (NIC) to a Token Ring network by means of Unshielded Twisted-Pair (UTP) Type 3 telephone cable. It converts the Token Ring NIC's DB9 signal into a twisted-pair RJ-45 compatible signal. The line filter reduces the noise picked up on Type 3 UTP cable and prevents a computer's noise radiation from disturbing other electronic equipment. The Type 3 Media Filter connects directly to the network interface card in the device and no external power is needed.

Both the double pigtail and compact types require very little clearance at the rear of your PC due to the slim line DB9 housing. This also significantly reduces accidental damage to the PC interface connector which often occurs with the larger rigid connector housing. The double pigtail type has a 6" STP cable on one end and a 15ft. UTP cable on the other end. Measuring 2.08"H x 1.22"W x .63"D, the compact type is the smallest in the industry. It meets IBM & FCC specifications. Every quality part is 100% tested before shipment to eliminate failures.

P/N# DEP-RJ45-MFTR (Double Pigtail)

P/N# DEP-RJ45-MFTR-CP (Compact)



DC-DEP-0608

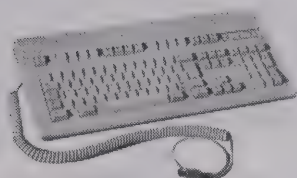
Token Ring Adapter Cable (Type 6, Data Connector to DB9)

The Token Ring Adapter Cable features DB9 molded type on one end and data connector on the other. Top quality, guaranteed! The Token Ring Adapter Cable conforms to IEEE 802.5 Token Ring Application. Standard length of 8 ft. cables are in stock.

PN# DC-DEP-0608 (8 ft.)

KEYBOARDS FOR PC, XT, AT AND PS/2 SYSTEMS*

G801-000



G802-100

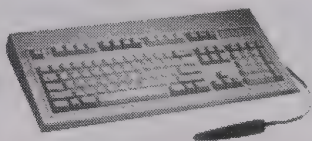


Full 101 Key Layout IBM® Compatible Keyboard

- 101 keys for PC, XT, AT, and PS/2 systems* as well as IBM® terminals.
- Switch selection of PC*, XT*, AT*, and PS/2* modes. LED's indicate the mode selected
- Superior keyswitches with "Gold Crosspoint" contacts help eliminate input errors
- High reliability
- Ergonomic, low profile design with "cylindrical style" key layout for easy operation.
- "Deep Dish" for home keys F and J with dimple on key 5 for touch typing
- Matte finished, 2-shot molded keycaps are wear resistant and easy to clean.
- Materials conform to UL94.
- IBM® overlays fit housing
- Separate cursor pad
- Synchronous data format
- Full N-key rollover
- Autorepeat: delay time and rate are programmable from the system (AT mode only).
- Includes housing and cable
- Full-travel (4mm) key switches
- Rugged construction

Model G801-000A: Linear Feel—Price Each \$96.23
Model G801-000E: Soft Tactile Feel—Price Each \$96.23
Model G801-000F: Click Tactile Feel—Price Each \$96.23

G801-600

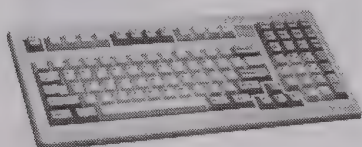


IBM® Compatible Keyboard with Built-In Bar Code Reader

- Input port for bar code stylus, laser scanning gun, or slot reader
- Bar codes are automatically identified and differentiated (all resolutions)
- 103 keys (2 keys for programming mode) conforming to ASCII international key layout per DIN 66003/66303
- Superior keyswitches with "Gold Crosspoint" contacts help eliminate input errors
- High reliability
- Ergonomic, low profile design with "cylindrical style" key layout for easy operation
- Includes housing and cable
- Rugged construction
- Full-travel (4mm) key switches
- "Deep Dish" for home keys F and J with dimple on key 5 for touch typing
- Matte finished, 2-shot molded keycaps are wear resistant and easy to clean
- Materials conform to UL94
- Non-volatile memory to retain keyboard modes
- All data is programmable
- IBM® overlays fit housing
- Separate cursor pad
- Synchronous data format
- Full N-key rollover
- Autorepeat: delay time and rate are programmable from the system

Model G801-600A: Linear Feel—Price Each \$318.01

G801-800



Compact, 101 Key, IBM® Compatible Keyboard with Separate Numeric Keypad

- Fits into 19" rack (less than 16" wide)
- 101 keys for PC, XT, AT, and PS/2 systems* as well as IBM® terminals.
- Switch selection of PC*, XT*, AT*, and PS/2* modes. LED's indicate the model selected
- High reliability
- Ergonomic, low profile design
- Includes housing and cable
- Rugged construction
- Autorepeat: delay time and rate are programmable from the system (AT mode only)
- Full-travel (4mm) key switches with membrane contacts
- "Deep Dish" for home keys F and J with dimple on key 5 for touch typing
- Matte finished, 2-shot molded keycaps are wear resistant and easy to clean
- Materials conform to UL94
- Separate cursor and numeric keypads
- Synchronous data format
- Alpha N-key rollover

Model G801-800A: Linear Feel—Price Each \$97.02
Model G801-800E: Soft Tactile Feel—Price Each \$97.02
Model G801-800F: Click Tactile Feel—Price Each \$97.02

IBM® Compatible Keyboard with 23 Programmable Function Keys

- 123 keys—23 function keys can be programmed with up to a total of 2K characters and "locked" with switch located on underside of keyboard
- Programmable function keys can be labeled with appropriate legends
- Non-volatile memory retains function programming
- Synchronous data format
- Full travel (4mm) keymodules with "Gold Crosspoint" contacts help eliminate input errors
- High reliability
- Separate cursor and numeric keypads.
- Rugged construction
- Ergonomic, low profile design with "cylindrical style" key layout for easy operation
- "Deep Dish" for home keys F and J with dimple on key 5 for touch typing
- Matte finished, 2-shot molded keycaps are wear resistant and easy to clean
- Materials conform to UL94
- Full N-key rollover
- Autorepeat: delay time and repeat rate are system programmable

Model G802-100B: Linear Feel—Price Each \$265.65

G803-000



Full 101 Key Layout IBM® Compatible Keyboard

- 101 keys for PC, XT, AT, and PS/2 systems* as well as IBM® terminals
- Switch selection of PC*, XT*, AT*, and PS/2* modes. LED's indicate the mode selected
- Superior keyswitches with "Gold Crosspoint" contacts to eliminate input errors
- High reliability
- Ergonomic, low profile design with "cylindrical style" key layout for easy operation
- Includes housing and cable
- Rugged construction
- Full-travel (4mm) key switches
- "Deep Dish" for home keys F and J with dimple on key 5 for touch typing
- Matte finished, 2-shot molded keycaps are wear resistant and easy to clean
- Materials conform to UL94
- IBM® overlays fit housing
- Separate cursor pad
- Synchronous data format
- Full N-key rollover
- Autorepeat: delay time and rate are programmable from the system (AT mode only)

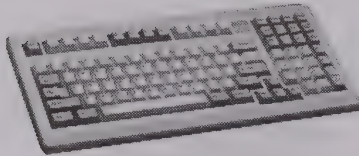
Model G803-000A: Linear Feel—Price Each \$92.91
Model G803-000E: Soft Tactile Feel—Price Each \$92.91
Model G803-000F: Click Tactile Feel—Price Each \$92.91

*TRADEMARKS OF INTERNATIONAL BUSINESS MACHINES CORPORATION

**WE BELONG TO A NATIONAL
BUYING GROUP, EDBA,
THAT GIVES US GREATER
PURCHASING POWER
TO ASSURE YOU OF
COMPETITIVE PRICES.**

KEYBOARDS FOR PC, XT, AT AND PS/2 SYSTEMS*

G811-800

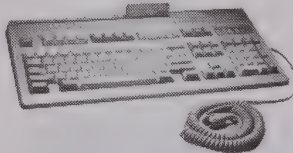


Compact, 101 Key, IBM* Compatible Keyboard

- Fits into 19" rack (less than 16" wide)
- 101 keys for PC, XT, AT, and PS/2 systems* as well as IBM* terminals
- Switch selection of PC, XT, AT, and PS/2* modes. LED's indicate the mode selected
- High reliability
- Ergonomic, low profile design
- Includes housing and cable
- Rugged construction
- Autorepeat: delay time and rate are programmable from the system (AT mode only)
- Full-travel (4 mm) key switches with membrane contacts
- "Deep Dish" for home keys F and J with dimple on key 5 for touch typing
- Matte finished, 2-shot molded keycaps are wear resistant and easy to clean
- Materials conform to UL94
- Separate cursor and numeric keypads
- Synchronous data format
- Alpha N-Key Rollover

Model G811-800A—Price Each \$95.48
Model G811-800B—Price Each \$95.48

G813-100

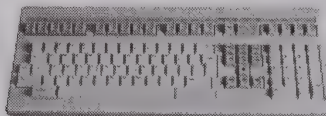


IBM* Compatible Keyboard with Integrated Magnetic Stripe Reader and Built-In Bar Code Wedge Option

- Cost efficient when compared to expensive auto identification hardware
- Auto ID information sent to system as keystrokes via the keyboard line
- No software required to operate
- Saves workspace
- Magnetic stripe reader accepts all major credit cards
- Bar code wedge accepts all major bar codes
- Capable of programming headers and terminators for magnetic card and bar code readers
- Works with 5V undecoded laser guns (adapter may be required)
- Safety: DIN VDE 0805/05.90
EN 60 950: 1988
CSA C 22.2 No. 220
UL 478
IEC 950: 1986
- Electro Magnetic Compatibility (EMC):
—ESD (in compliance with IEC 801-2) 15 kV
—RFI/EMI: Post-Vfg. 1046/1984 (VDE 0871, Class B)
FCC Part 15, Subpart J, Class B
CISOR 22/EN 55022
- Card reader complies w/ISO regulation No. 3554
- Adjustable for operation in PC, XT or XT286, AT and PS/2 mode
- LED indicators show selected mode
- Reliability: MCBF = 1×10^9 operations
MTBF = 80,000 hours
- "Deep Dish" for homekeys F and J and dimple on "5" of numeric pad assure location of fingers when touch-typing
- Materials conforming to UL94
- Linear feel
- Life of each keymodule: $> 50 \times 10^6$ operations

Model 813-100A: Tow Track Magnetic Card Reader—
Price Each \$423.50
Model 813-100D: Two Track Magnetic Card Reader and Built-In Bar Code Wedge—Price Each \$509.74

G803-307



VT-220 Style Keyboard

- 105 keys using superior Cherry MX keyswitches with "Gold Crosspoint" contacts to eliminate input errors
- High reliability
- Ergonomic, low profile design
- Full-travel (4mm) key switches
- Includes housing and cable
- Rugged construction
- "Deep Dish" for home keys F and J with dimple on key 5 for touch typing
- Matte finished, 2-shot molded keycaps are wear resistant and easy to clean
- Materials conform to UL94
- Separate cursor pad
- Full N-key rollover

Model 803-307A—Price Each \$141.27

G813-000

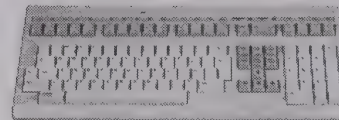


Full 101 Key Layout IBM* Compatible Keyboard

- 101 keys for PC, XT, AT, and PS/2 systems*
- Switch selection of PC*, XT*, AT*, and PS/2* modes. LED's indicate the mode selected
- Membrane switch contacts with mechanical keymodules to provide linear or tactile feel
- High reliability
- Ergonomic, low profile design
- Includes housing and cable
- Full-travel (4mm) key switches
- Matte finished, 2-shot molded keycaps are wear resistant and easy to clean
- Materials conform to UL94
- IBM* Overlays fit housing
- Separate cursor and numeric pads
- Synchronous data format
- Alpha N-key rollover
- Autorepeat: rate programmable from system (AT mode only)
- Rugged construction

Model G813-000A: Linear Feel—Price Each \$79.80

G803-300

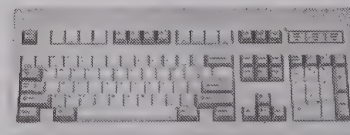


Terminal Keyboard with RS-232C Serial Interface

- 105 keys using superior Cherry MX keyswitches with "Gold Crosspoint" contacts to eliminate input errors
- RS-232C serial interface
- High reliability
- Ergonomic, low profile design with "cylindrical style" key layout for easy operation
- Full-travel (4mm) key switches
- Includes housing and cable
- Materials conform to UL 94
- Separate cursor pad
- Rugged construction
- Full N-key rollover
- "Deep Dish" for home keys F and J with dimple on key 5 for touch typing
- Matte finished, 2-shot molded keycaps are wear resistant and easy to clean

G803-300A—Price Each \$169.20

G833-000 FOR AT AND PS/2 SYSTEMS*



Full 101 Key Layout IBM* Compatible Keyboard

- 101 keys for AT, and PS/2 systems
- Membrane switch contacts with a single rubber sheet to provide a crisp tactile feel
- High reliability
- Ergonomic, low profile design
- Angle of inclination is 6.3°
- Rugged construction, yet lightweight (3.3 lbs)
- Full-travel (3.8 ± 0.2mm) key switches
- Cable length (unextended) 1600mm + 60mm with 5-Pin DIN at style connector
- Matte finished, sublimated keycaps are wear resistant and easy to clean
- "F" and "J" and "5" keys have a raised bar for home row identification
- Materials conform to UL94
- Separate cursor and numeric pads
- Synchronous data format
- Alpha N-key rollover
- Autorepeat: rate programmable from system (AT mode only)

Model 833-000A—Price Each \$55.83

*TRADEMARKS OF INTERNATIONAL BUSINESS MACHINES CORPORATION

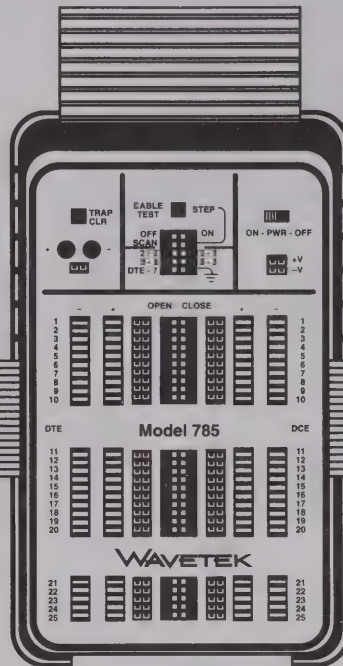
The Instrumentation Products Division of Beckman Industrial is now a part of Wavetek Corporation

- Internally Powered
- 100 LED's for Full RS232C Control
- Model 785 Built-in Cable Tester
- Built-in Pulse Trap
- Faceplate Available Output Voltages
- Modem Loopback Switches
- Dual Gender Connectors

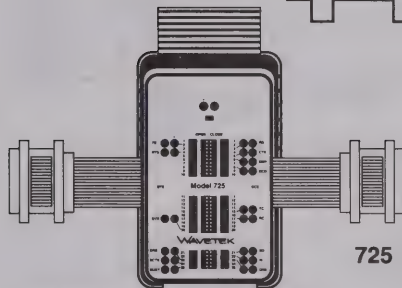
Breakout Boxes

775 and 785. Models 775 and 785 are two battery powered BOBs that provide full RS232C monitoring. Each unit has faceplate voltages available to emulate control signals on any line, pulse trapping capabilities to capture transients as short as 2μsec in duration, a separate bank of dip switches to allow the user to convert pin 7 (signal ground) to a signal carrying line for parallel hookups (ie, Centronics) and to perform the commonly used 2/3 loopback settings. Model 785 has a cable tester that dynamically tests cables for shorts, opens, improper connections, or allows the user to determine the configuration of a cable, by automatically or manually stepping through each line.

775 _____ \$299.00
785 _____ \$345.00



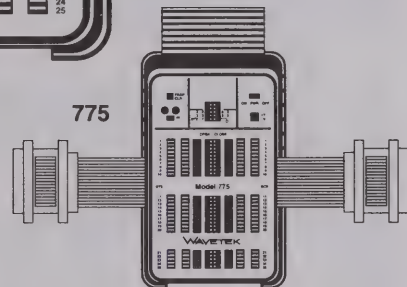
785



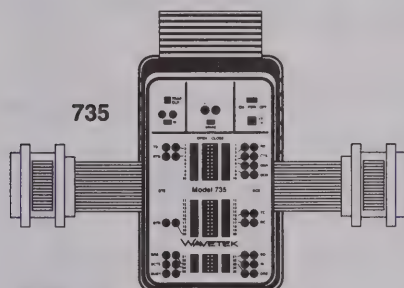
725

- Full RS232 Breakout Control
- 15 Primary Lines LED Monitored
- Line Powered
- 49 Probe Points & DIP Switches
- Low Cost

725. The Model 725 EASY BOB™ is a low cost, line-powered breakout box which allows monitoring and interface patching of the 15 most common RS232C lines. Red (+) or Green (-) LED's identify positive or negative voltages for data flow. A spare LED is provided for monitoring any selected additional line. _____ \$99.00



775

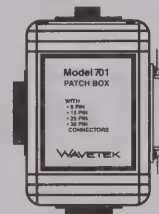


735

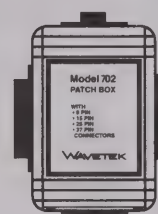
- Internally Powered
- Dual Gender Connectors
- 15 Primary Lines LED Monitored
- Spare LED
- Built-In Pulse Trap
- Faceplate Output Voltages

735. Model 735 uses 15 LED pairs to monitor RS232C data lines, red(+) and green (-). It has transient pulse trapping capabilities for signals as short as 2μsec in duration. Faceplate voltages available to emulate control signals on any selected line with either positive or negative polarity. _____ \$219.00

Connector Patch Boxes



701



702

- Instant Cable Matching
- Custom Interface Set-Up
- Four Connector Types
- Tough, Compact Case

701 and 702. The Models 701 and 702 are dedicated four-way patching modules for quick interfacing to the most common RS232C and RS449 connectors. Simply plug into the connectors to be patched, and using the jumpers supplied, perform the desired interconnect. The Model 701 contains four connectors for patching to RS232C (CCITT V.24), Centronics, DB9 and DB15 configured datalines. The Model 702 allows quick patching between DB25, DB9, DB15 and DB37 (RS449) connectors. _____ \$40.00
702-25. Dual gender DB25 connectors patch box. _____ \$40.00

**CALL US FOR INFORMATION
ON ANY UNLISTED PARTS OR EQUIPMENT.**

MULTICONDUCTOR BRAID SHIELDED CABLES UL2464, 80°C, 300 VOLTS

Tinned copper conductors with color-coded polyvinylchloride insulation, twisted, with gray polyvinylchloride jacket overall. Rated 350 volts except as otherwise noted. **Operating Temperature:** -20°C to +80°C.



**1243
1243/4**

Alpha No.	Conductor			Nominal		Net per Spool	
	No.	Size	Strand	Wall	O. D.	100 ft.	1000 ft.
1243	3	22	7/30	.20	.20	\$ 78.00	\$ 389.80
1243/4	4	22	7/30	.20	.18 x .28	74.26	493.80
1243/5	5	22	7/30	.20	.20 x .30	135.20	1081.40

Color Code: 1-White, 2-Black, 3-Red, 4-Green.

MULTICONDUCTOR FOIL SHIELDED CABLES UL2576, 80°C, 150 VOLT



**1292C
1293C**

Stranded tinned copper with color-coated polyvinylchloride insulation. Aluminum/polyester tape, foil facing outward, with gray polyvinylchloride jacket overall. Passes UL VW-1 flame test.

Alpha No.	Conductor			Nominal		Net per Spool	
	No.	Size	Strand	Wall	O. D.	100 ft.	1000 ft.
1292C	2	22	7/30	0.032	0.17	\$ 46.76	\$ 232.78
1293C	3	22	7/30	0.032	0.18	63.44	316.82
1294C	4	22	7/30	0.032	0.19	72.10	381.52
1295C	5	22	7/30	0.032	0.20	74.36	433.02
1296C	6	22	7/30	0.032	0.22	76.64	484.72
1297C	7	22	7/30	0.032	0.22	79.52	530.04
1298C	8	22	7/30	0.032	0.23	88.38	588.14
1299C	9	22	7/30	0.032	0.25	90.64	639.84
1299/10C	10	22	7/30	0.032	0.27	92.90	743.24
1299/12C	12	22	7/30	0.032	0.28	104.24	833.88
1299/15C	15	22	7/30	0.032	0.30	161.30	1289.56
1299/20C	20	22	7/30	0.032	0.33	215.88	1725.66
1299/25C	25	22	7/30	0.032	0.37	261.00	2087.60
1299/30C	30	22	7/30	0.032	0.39	308.80	2468.92
1299/37C	37	22	7/30	0.032	0.43	379.04	3031.30
1299/40C	40	22	7/30	0.032	0.44	403.14	3225.14
1299/50C	50	22	7/30	0.035	0.48	506.56	4052.44

Color Code: See color chart below.

MULTICONDUCTOR FOIL SHIELDED CABLES UL2576, 75°C CL-2, 150 VOLT-AWM



Stranded tinned copper with color-coded polyvinylchloride insulation. Aluminum/polyester tape, foil facing outward, with gray polyvinylchloride jacket overall. Passes the UL Subject 13 Vertical Tray flame test.

Alpha No.	Conductor			Nominal		Net per Spool	
	No.	Size	Strand	Wall	O. D.	100 ft.	1000 ft.
1212C	2	24	7/32	0.032	0.16	\$ 45.32	\$ 226.18
1213C	3	24	7/32	0.032	0.17	59.74	298.08
1214C	4	24	7/32	0.032	0.18	63.44	316.82
1215C	5	24	7/32	0.032	0.18	70.04	381.52
1216C	6	24	7/32	0.032	0.20	72.10	420.24
1217C	7	24	7/32	0.032	0.20	74.16	458.96
1218C	8	24	7/32	0.032	0.21	76.64	510.68
1219C	9	24	7/32	0.032	0.22	82.60	549.40
1219/10C	10	24	7/32	0.032	0.23	88.38	588.14
1219/12C	12	24	7/32	0.032	0.27	90.64	723.88
1219/15C	15	24	7/32	0.032	0.28	114.74	917.74
1219/20C	20	24	7/32	0.032	0.30	160.06	1279.88
1219/25C	25	24	7/32	0.032	0.33	189.94	1518.84
1219/37C	37	24	7/32	0.032	0.39	287.78	2300.82
1219/40C	40	24	7/32	0.032	0.41	356.38	2849.80
1219/50C	50	24	7/32	0.032	0.45	443.72	3548.36

Color Code: See color chart below.

MULTICONDUCTOR FOIL SHIELDED CABLE 80°C, 300 VOLT



Stranded tinned copper with color-coded polyvinylchloride, polypropylene or polyethylene. Aluminum/polyester tape, foil facing outward with gray polyvinylchloride jacket overall.

Alpha No.	Conductor			Nominal		Net per Spool	
	No.	Size	Strand	Wall	O.D.	100 ft.	1000 ft.
1243/3C	3	20	7/28	.029	.21	\$65.20	\$434.72

Color Code: 1-white, 2-black, 3-red, 4-green.

COLOR CODE

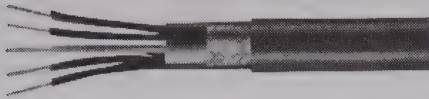
No.	Base Color	1st Stripe	2nd Stripe	No.	Base Color	1st Stripe	2nd Stripe	No.	Base Color	1st Stripe	2nd Stripe
1-	Black	—	—	21-	White	Brown	—	41-	White	Green	Red
2-	Red	—	—	22-	White	Orange	—	42-	White	Green	Green
3-	White	—	—	23-	White	Gray	—	43-	White	Green	Blue
4-	Green	—	—	24-	White	Violet	—	44-	White	Green	Brown
5-	Orange	—	—	25-	White	Black	Red	45-	White	Green	Violet
6-	Blue	—	—	26-	White	Black	Green	46-	White	Blue	Black
7-	Brown	—	—	27-	White	Black	Yellow	47-	White	Blue	Red
8-	Yellow	—	—	28-	White	Black	Blue	48-	White	Blue	Green
9-	Violet	—	—	29-	White	Black	Brown	49-	White	Blue	Blue
10-	Gray	—	—	30-	White	Black	Orange	50-	White	Blue	Brown
11-	Pink	—	—	31-	White	Black	Gray	51-	White	Blue	Violet
12-	Tan	—	—	32-	White	Black	Violet	52-	White	Brown	Black
13-	Red	Green	—	33-	White	Black	Black	53-	White	Brown	Red
14-	Red	Yellow	—	34-	White	Red	Black	54-	White	Brown	Green
15-	Red	Black	—	35-	White	Red	Red	55-	White	Brown	Blue
16-	White	Black	—	36-	White	Red	Green	56-	White	Brown	Brown
17-	White	Red	—	37-	White	Red	Blue	57-	White	Brown	Violet
18-	White	Green	—	38-	White	Red	Brown	58-	White	Violet	Red
19-	White	Yellow	—	39-	White	Red	Violet	59-	White	Violet	Green
20-	White	Blue	—	40-	White	Green	Black	60-	White	Violet	Blue

**OUR PRICES ARE COMPETITIVE DUE TO OUR ASSOCIATION
WITH A NATIONAL BUYING GROUP.**



Computer Cables, Cords & Cordsets

LOW CAPACITANCE CAD/CAM CABLES MULTICONDUCTOR SUPRASHIELD CABLES UL 2919 NEC TYPE CM E1A RS-232, E1A-423, E1A-485



Stranded tinned copper with color-coded cellular (foam) polypropylene insulation. The Suprashield™ is aluminum/polyester/aluminum foil with a gray polyvinylchloride jacket overall. 300V rating, -20°C to +80°C temperature rating.

28 AWG (7/36) INSULATION THICKNESS .013"

Alpha No.	No. of Conds.	Jkt. Thk. (In.)	Nom. O.D. (In.)	Price per 100 ft. Spool
3483	3	.035	.19	\$ 42.94
3484C	4	.035	.20	50.75
3485C	5	.035	.21	58.08
3486C	6	.035	.22	36.92
3488C	8	.035	.23	59.30
3489C	9	.035	.25	62.20
3490/25C	25	.035	.35	149.34

Capacitance-Multiconductor: 12pF/pt (39.4pF/M); Multipair: 12pF/pt (36.0pF/M)

MULTIPAIR FOIL SHIELDED CABLES UL 2490, 2493, 2668 NEC TYPE CL2 25 AWG



ALPHA-BYTE™ Low Capacitance Data Cables As today's computers become faster and more powerful, the need for cables with improved transmission becomes even more critical. In keeping pace with a new computer technology, Alpha Wire has expanded its data cable line to include specialized cable for low capacitance, extended distance transmission. With its unique structure, The Alpha-Byte™ line enables cable pairs to exhibit a lower dielectric constant—a key electrical characteristic resulting in less loss, lower signal distortion and higher transmission speeds. Suitable for use with EIA RS-232C, RS-449 (RS-422, RS-423.) CC ITT V 24 and V 35 interfaces.

24 AWG, (7/32), INDIVIDUALLY SHIELDED

Alpha No.	No. of Conds.	Jkt. Thk. (In.)	Nom. O.D. (In.)	UL Style No.	Price per 100 ft. Spool
6073C	3	.048	.37	2493	\$ 56.80
6076C	6	.048	.48	2493	139.16
6079C	9	.065	.59	2493	163.30
6079/11C	11	.065	.64	2493	227.20
6079/12C	12	.065	.66	2493	284.00
6079/15C	15	.065	.72	2493	361.82

Capacitance: 12.5 pF/Ft (41.0 pF/M)

INTERNATIONAL POWER SUPPLY CORDS AND CORDSETS

Alpha's internationally approved power cords and cordsets for use in a wide range of products. The correct approvals are molded on the individual plugs with the approved symbols.

3-CONDUCTOR POWER SUPPLY SETS

The sets are unshielded, polarized cordage. All sets rated for 10 A, 250 V service. All Cenelec approved PVC jackets are black, gray or white. **Nominal O.D.: 0.27". AWG: 16.**

Alpha No.	Length (Ft.-In.)	Strand	Plug	Conn.	Country Approval	Price Each
950	8' 2"	31/32	BS/89/13	C13	U. K.	\$11.08
920	8' 2"	31/32	VIIG	C13	Cont. Euro.	7.38
922	8' 2"	31/32	VIIG	C13-W*	Cont. Euro.	7.95
910	8' 2"	31/32	SAA/3	C13	Australia	8.52
960	8' 2"	31/32	IL/3	C13	Israel	9.66

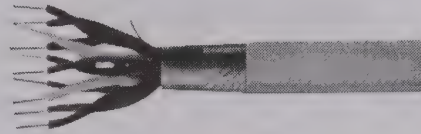
*Right angle

3-CONDUCTOR POWER SUPPLY CORDS

Unshielded, rated for 10 A, 250 V service. Free end has jacket stripped 2", insulation ¾" and conductors twisted. PVC jackets are black, gray or white. **Nominal O.D.: 0.27". AWG: 16.**

Alpha No.	Length (Ft.-In.)	Strand	Plug	Conn.	Country Approval	Price Each
911	8' 2"	21/32	SAA/3	.....	Australia	\$6.82
923	8' 2"	31/32	VIIG	.....	Cont. Euro.	6.82
951	8' 2"	31/32	BS/89/113	.....	U. K.	8.80

LOW CAPACITANCE CAD/CAM CABLES MULTIPAIR SUPRASHIELD CABLES UL 2919 NEC TYPE CM E1A RS-232, E1A-423, E1A-485



Stranded tinned copper with color-coded cellular (foam) polypropylene insulation. The Suprashield™ is a aluminum/polyester/aluminum foil with a gray polyvinylchloride jacket overall. 300V rating, -20°C to +80°C temperature rating.

28 AWG (7/36) STRAND INSULATION THICKNESS .013"

Alpha No.	No. of Conds.	Jkt. Thk. (In.)	Nom. O.D. (In.)	Price per 100 ft. Spool
3492C	2	.035	.23	\$ 48.73
3493C	3	.035	.24	60.85
3494C	4	.035	.27	63.90
3495C	5	.035	.29	85.20
3496C	6	.035	.30	103.97
3500/12C†	12½	.035	.38	142.00

Capacitance-Multiconductor: 12pF/pt (39. 4pF/M); Multipair: 12pF/pt (36.0pF/M)

MULTIPAIR FOIL SHIELDED CABLES UL 2919 NEC TYPE CL2



Stranded tinned copper conductor with color-coded high density polyethylene insulation. Conductors paired with a staggered pair lay scheme. Gray polyvinylchloride jacket with aluminum/polyester/aluminum tape shield overall.

24 AWG, (7/32)

Alpha No.	No. of Conds.	Jkt. Thk. (In.)	Nom. O.D. (In.)	Price per 100 ft. Spool
6083C	3	.035	.24	\$ 49.70
6084C	4	.035	.26	42.60
6087C	7	.035	.31	146.64
6089C	9	.035	.34	113.60
6089/18C	18	.035	.45	177.50

Capacitance: 14.7 pF/Ft (48.2 pF/M)

3-CONDUCTOR INTERNATIONAL JUMPER CORD

Unshielded, jumper cord for use anywhere in the world, 1.00mm² stranded bare copper conductor, rated for 10 A, 250 V service. Jacket available in black, gray or white. **Nominal O.D.: .314. AWG: 18.**

Alpha No.	Length (Ft.-In.)	Strand	Plug	Conn.	Country Approval	Price Each
953	8' 2"	56/34	C14G	136	All	\$9.66

2-CONDUCTOR POWER SUPPLY SET

Cordset used internationally for consumer electronic products. Rated for 2.5 A, 250 V service. PVC jacket available in black, gray or white. **Nominal O.D.: .133" x .22". AWG: 18.**

Alpha No.	Length (Ft.-In.)	Strand	Plug	Conn.	Country Approval	Price Each
952	5' 5"	23/32	XVI	C7	Cont. Euro.	\$4.43

Coaxial & Twinaxial Data Cables

95 AND 100 OHM TWINAXIAL CABLE

Mfr. No.	Conductors*			Di-elec-tric*	Shields*		Cover-age %	Nom. Impedance Ohms	Jacket		Price Per Put Up 100 ft.
	1st	2nd	Strand		1st	2nd			Mat.*	O.D. (In.)	
9816	BC	BC#	7/26	PE	TC	TC	96	95	NCV	.420	\$127.80
9817	BC	TC	7/28	PE	TC	.....	85	100	PVC	.330	49.70
9818C	BC	TC	7/28	PE	TC	.....	95	100	PVC	.330	170.40*
9818D	BC	TC	7/28	PE	TC	.....	95	100	PE	.330	84.48

Center strand tinned for identification. * Box of 500.

1, 2, AND 3 PAIR DATA CABLES

78 OHM CABLES

Mfr. No.	Conductors*			Di-elec-tric*	Shields*		Cover-age %	Drain Wire	Jacket		Price Per Put Up 100 ft.
	No.	Mat.*	Strand		1st	2nd			Mat.*	O.D. (In.)	
9814C	2	TC	7/28	PE	A/M	TC	100	.....	PVC	.243	\$42.60
9815C	2	TC	7/28	PE	TC	.....	93	.....	PVC	.242	35.50

100 OHM CABLE

Mfr. No.	Conductors*			Di-elec-tric*	Shields*		Cover-age %	Drain Wire	Jacket		Price Per Put Up 100 ft.
	No.	Mat.*	Strand		1st	2nd			Mat.*	O.D. (In.)	
9819C	4	TC	#28	PE	A/M	TC	100	TC	PVC	.290	\$42.60

COAXIAL CABLE—INDOOR

Mfr. No.	RG Type	Conductor			Dielectric*	Shield*	Jacket		Impedance (Ohms)	Capacitance pF/ft	Price Per Put Up 100 ft.
		Strand	Mat'l*.	AWG			Mat'l*	Diameter Inches			
9804C	6/U	Solid	BC	18	FPE	A/M Plus TC Braid	Black PVC	0.270	71	17.3	\$43.88
9845	Dual 59 B/U	Solid	CW	23	PE	BC Braid	Black PVC	.242 x 504	75	20.1	52.54
9062A	62 A/U	Solid	CW	22	SSP	BC Braid	PVC	.242	93	13.2	33.94

75 OHM PRECISION VIDEO CABLE—INDOOR

Mfr. No.	RG Type	Conductor			Dielectric*	Shield*	Jacket		Impedance (Ohms)	Capacitance pF/ft	Price Per Put Up 100 ft.
		Strand	Mat'l*.	AWG			Mat'l*	Diameter Inches			
9807	Video Cable	Solid	BC	20	PE	Double TC Braid	Black PE	.304	75	20.7	\$79.86

124 OHM CABLE

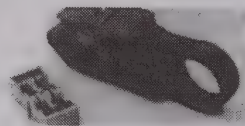
Mfr. No.	Conductors*			Di-elec-tric*	Shields*		Cover-age %	Drain Wire	Jacket		Price Per Put Up 100 ft.
	No.	Mat.*	Strand		1st	2nd			Mat.*	O.D. (In.)	
9820C	2	BC	#16	FPE	A/M/A	TC	100	.....	PVC	.440	\$113.60
9821	2	TC	7/33	PE	A/M	.....	100	TC	PVC	.242	21.30

*A/M, aluminum/Mylar®; A/M/A, aluminum/Mylar®/aluminum; BC, bare copper; CW, copper-covered steel; FPE, cellular (foam) polyethylene; NCV, non-contaminating polyvinylchloride; PE, solid polyethylene; PVC, polyvinylchloride; SSP, semisolid polyethylene; TC, tinned copper.

® Teflon is a registered trademark of E.I. DuPont.

® Mylar is a registered trademark of E.I. DuPont.

COAXIAL CABLE STRIPPER



Easily strips single-shielded or double-shielded coaxial cable in a single motion. Typical cassette life is over 2,000 strips and when the blades dull simply insert Alpha's AT-141, Replacement Cassette.

Mfr. No.	Cable	Description
AT-150	IEEE 802.3 (10Base5) "Thick" Coaxial Cable	Single Blade Stripping Tool
AT-140/3	IEEE 802.3 (10Base2) "Thin" Coaxial Cable	Multi-Blade Stripping Tool
AT-141/3	IEEE 802.3 (10Base2) "Thin" Coaxial Cable	3-Blade Replacement Cassette (Brown) For Use With AT-140/3



Audio and Communication Cables

UL2576 NEC TYPE CL2 80°C, 150V UNSHIELDED, PAIRED CONDUCTORS

For balanced intercom systems, annunciators, and telephones. Suitable for outdoor installation. Each conductor 22 AWG solid tinned copper; color-coded PVC insulation; conductors twisted into pairs; gray polyvinylchloride jacket overall. **Operating Temperature:** -20°C to +80°C. **Color Code:** available on request.

Alpha No.	Conductor		Nominal			Price per 1000 Ft. Spool [‡]
	Pairs	Strand	Wall	Jacket	O.D.	
SOLID CONDUCTORS, 22 GAUGE, 150 VOLTS						
1300C	1	Solid	.010"	.032"	.154"	\$ 102.41
1302C	2	Solid	.010"	.032"	.222"	178.83
1304C	3	Solid	.010"	.032"	.234"	247.76
1305C	4	Solid	.010"	.032"	.252"	327.71
1306C	5	Solid	.010"	.032"	.280"	397.40
1307C	6	Solid	.010"	.032"	.289"	435.47
1307/9C	9	Solid	.010"	.032"	.334"	651.14
1308/11C	11	Solid	.010"	.032"	.354"	840.67
1309C	13	Solid	.010"	.032"	.374"	948.73
1310C	16	Solid	.010"	.032"	.425"	1271.70
1313C	27	Solid	.010"	.040"	.521"	1947.15

STRANDED CONDUCTORS, 22 GAUGE, 150 VOLTS						
1317C	2	7/30	.010"	.032"	.239"	\$ 206.04
1318C	3	7/30	.010"	.032"	.252"	310.28
1319C	4	7/30	.010"	.032"	.274"	395.88
1320C	5	7/30	.010"	.032"	.304"	494.61
1322C	6	7/30	.010"	.035"	.320"	521.67
1323C	9	7/30	.010"	.035"	.370"	799.40
1324C	11	7/30	.010"	.035"	.400"	1008.80
1325C	12	7/30	.010"	.035"	.410"	1101.89
1327C	15	7/30	.010"	.040"	.450"	1373.20
1327/19C	19	7/30	.010"	.040"	.480"	1698.01
1329C	27	7/30	.010"	.040"	.708"	2552.42

STRANDED CONDUCTORS, 18 GAUGE, UL2464, 300 VOLTS						
1131C	1	16/30	.010"	.032"	.222"	\$ 194.74
1132C	2	16/30	.010"	.035"	.347"	374.48
1133C	3	16/30	.016"	.037"	.356"	643.80
1134C	4	16/30	.010"	.040"	.412"	715.24
1135C	5	16/30	.010"	.045"	.469"	950.58
1136C	6	16/30	.016"	.045"	.540"	1411.57
1138C	8	16/30	.010"	.050"	.542"	1539.34
1139C	9	16/30	.016"	.055"	.616"	1822.43
1142C	12	16/30	.016"	.055"	.654"	2419.59
1145C	15	16/30	.016"	.060"	.760"	3002.86
1149C	19	16/30	.016"	.070"	.830"	3790.80

FOIL SHIELDED JACKETED CABLE UL STYLE 2092, 2093, 2094*

Each conductor stranded tinned copper with color-coded polyethylene insulation; cabled and wrapped Mylar® supported aluminum foil shield (100% coverage) with drain wire laid parallel; aluminum foil faces outward for maximum grounding contact; chrome gray polyvinylchloride jacket overall. Lightweight; reduced cable diameter; quick, easy termination to ground. **Operating Temperature:** -20°C to +60°C. Jacket, .020" thick; wall, .016" thick nom. (2442, 2444; Jkt., .030"; wall, .020") **Color Code:** 1-Black, 2-Red, 3-Clear, 4-Green. **Voltage Rating:** 300 V.

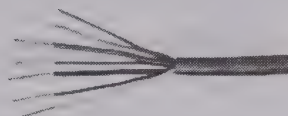
Alpha No.	Conductors			Nom. O.D.	Color Code	Price per 100 Ft. Spool†
	No.	Size	Strand			
2400C	2	24	7/32	.160"	1, 3	\$ 23.00
2401C	2	22	7/30	.170"	1, 3	25.28
2402C	2	22	7/30	.170"	1, 2	27.83
2403C	3	22	7/30	.185"	1-3	29.82
2404C	4	22	7/30	.210"	1-4	43.35
2411C	2	20	10/30	.186"	1, 3	24.25
2412C	2	20	10/30	.186"	1, 2	25.56
2413C	3	20	10/30	.205"	1-3	28.40
2414C	4	20	10/30	.225"	1-4	69.07
2421C	2	18	16/30	.210"	1, 3	30.53
2422C	2	18	16/30	.210"	1, 2	46.56
2423C	3	18	16/30	.230"	1-3	43.17
2424C	4	18	16/30	.255"	1-4	87.00
2432C	2	16	26/30	.245"	1, 2	60.83
2433C	3	16	26/30	.270"	1-3	63.43
2442C†	2	14	41/30	.310"	1, 3	106.90
2444C†	2	12	65/30	.350"	1, 3	159.11

*2 Cond.—2092; 3 Cond.—2093; 4 Cond.—2094. †Not UL Listed.

† Also available in spool of 500 ft.; prices on request.

UNSHIELDED MULTICONDUCTOR, PLASTIC JACKET

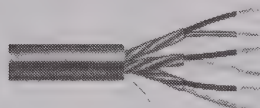
#22 GAUGE, UL2576, 80°C, 150 VOLTS



For unbalanced intercom systems, low voltage relay control cable, PA systems, signal systems, electronic computers. Each conductor 22 AWG stranded tinned copper; color-coded polyvinylchloride insulation; conductors twisted; Gray PVC jacket overall. **Voltage Rating:** 150 V. **Operating Temperature:** -20°C to +80°C.

Alpha No.	Conductor		Nominal			Price per 100 Ft. Spool†
	No.	Strand	Wall	Jacket	O.D.	
1172C	2	7/30	.010"	.032"	.164"	\$ 12.35
1173C	3	7/30	.010"	.032"	.169"	27.82
1174C	4	7/30	.010"	.032"	.194"	19.60
1175C	5	7/30	.010"	.032"	.199"	36.38
1176C	6	7/30	.010"	.032"	.209"	48.90
1177C	7	7/30	.010"	.032"	.214"	58.84
1178C	8	7/30	.010"	.032"	.224"	60.25
1179C	9	7/30	.010"	.032"	.249"	62.21
1180C	10	7/30	.010"	.032"	.259"	63.89
1181C	12	7/30	.010"	.032"	.279"	68.78
1181/15C	15	7/30	.010"	.032"	.304"	108.52
1181/20C	20	7/30	.010"	.032"	.324"	140.62
1181/25C	25	7/30	.010"	.032"	.364"	168.13
1181/30C	30	7/30	.010"	.032"	.379"	209.41
1181/40C	40	7/30	.010"	.032"	.439"	268.38
1181/50C	50	7/30	.010"	.035"	.500"	353.99
1181/60C	60	7/30	.010"	.035"	.530"	595.66

SHIELDED MULTICONDUCTOR, PLASTIC JACKET UL 2493 60°C 300-400 VOLT



Tinned copper conductors with color-coded polypropylene insulation, twisted into pairs. Tinned copper 22 gauge drain wire with Mylar® supported aluminum foil shield, aluminum facing inward. Chrome gray PVC jacket overall. Capacitance: Between cond. of a pair, 25pF/ft.; single cond. to shield, 45pF/ft. For audio, RF, and pulse applications requiring superior circuit isolation.

UL2493, 60°C, NO SPECIFIED VOLTAGE

Alpha No.	Conductor			Nominal			Price per 100 Ft. Spool†
	Pairs	No.	Strand	Wall	Jacket	O.D.	
#22 GAUGE							
6000C	3	6	Solid	.010"	.045"	.275"	\$ 476.89*
6002C	6	12	Solid	.010"	.045"	.348"	993.52*
6006C	11	22	Solid	.010"	.045"	.434"	1696.62*
6008C	15	30	Solid	.010"	.045"	.495"	2292.73*
6010C	3	6	7/30	.010"	.045"	.292"	50.41
6012C	6	12	7/30	.010"	.045"	.372"	88.04
6014C	9	18	7/30	.010"	.045"	.430"	161.88
6016C	11	22	7/30	.010"	.045"	.467"	199.51
6017C	12	24	7/30	.010"	.045"	.480"	213.71
6018C	15	30	7/30	.010"	.060"	.563"	238.56
6019C	17	34	7/30	.010"	.060"	.610"	312.40
6020C	19	38	7/30	.010"	.060"	.590"	310.98
6022C	27	54	7/30	.010"	.060"	.697"	434.52

#20 GAUGE 60°C 350V

6032C	2	4	10/30	.013"	.045"	.310"	\$ 61.90
6033C	3	6	10/30	.013"	.045"	.365"	58.22
6036C	6	12	10/30	.013"	.045"	.500"	130.64
6039C	9	18	10/30	.013"	.045"	.615"	198.09
6042C	12	24	10/30	.013"	.045"	.690"	256.31
6045C	15	30	10/30	.013"	.045"	.740"	306.72

#18 GAUGE 60°C 400V

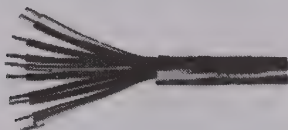
6023C	3	6	16/30	.016"	.045"	.392"	\$ 73.84
6024C	6	12	16/30	.016"	.060"	.585"	156.20
6025C	9	18	16/30	.016"	.060"	.630"	262.70
6026C	12	24	16/30	.016"	.070"	.765"	342.22
6027C	15	30	16/30	.016"	.070"	.830"	428.13

† Also available in spool of 500 ft.; prices on request. *per 1000 ft.



Audio and Communication Cables

UNSHIELDED WITH PLASTIC JACKET UL2509, 80°C, 300 VOLTS NEC TYPE CM



Tinned copper with color-coded polyvinylchloride insulation, twisted, with gray polyvinylchloride jacket overall. **Voltage Rating:** 300 volts, except as otherwise noted. **Operating Temperature:** -20°C to +80°C.

Alpha no.	Conductors			Nominal		Price per 100 Ft. Spool [‡]
	No.	Size	Strand	Wall	O.D.	
1895C	2	20	7/28	.016"	.18"	\$ 28.58
1896C	3	20	7/28	.016"	.19"	43.11
1896/4C	4	20	7/28	.016"	.21"	43.41
1896/5C	5	20	7/28	.020"	.23"	55.93
1896/6C	6	20	7/28	.016"	.25"	66.94
1896/7C	7	20	7/28	.020"	.25"	69.69
1896/8C	8	20	7/28	.016"	.27"	76.74
1896/9C	9	20	7/28	.020"	.30"	77.50
1896/10C	10	20	7/28	.016"	.33"	98.59
1896/12C	12	20	7/28	.016"	.35"	99.97
1896/15C	15	20	7/28	.030"	.39"	130.07
1897C	2	18	16/30	.016"	.20"	19.74
1898C	8	18	16/30	.016"	.21"	45.85
1898/4C	4	18	16/30	.016"	.24"	42.60
1898/5C	5	18	16/30	.020"	.26"	50.71
1898/6C	6	18	16/30	.016"	.29"	80.70
1898/7C	7	18	16/30	.020"	.29"	76.68
1898/8C	8	18	16/30	.016"	.31"	99.13
1898/9C	9	18	16/30	.025"	.34"	104.37
1898/10C	10	18	16/30	.025"	.37"	156.53
1898/12C	12	18	16/30	.025"	.38"	129.22
1898/15C	15	18	16/30	.030"	.44"	165.34
1898/19C	19	18	16/30	.030"	.47"	251.34
1898/25C	25	18	16/30	.025"	.56"	311.69
1899C	2	16	19/29	.016"	.22"	53.65
1899/3C	3	16	19/29	.020"	.24"	95.23
1899/4C	4	16	19/29	.020"	.27"	127.49

SHIELDED GENERAL PURPOSE PLASTIC JACKET



Each conductor, stranded tinned copper with color-coded polyethylene insulation, .014" thick, cabled with fillers where necessary; mylar wrap; braided, tinned copper shield; chrome gray polyvinylchloride jacket overall. Not UL recognized. **Voltage Rating:** 600 volts. **Operating Temperature:** -20°C to +60°C.

Alpha no.	Conductors			Nominal		Price per 100 Ft. Spool [‡]
	No.	Size	Strand	Thk.	O.D.	
1712	2	20	26/34	.030"	.245"	\$ 89.11
1713	3	20	26/34	.035"	.250"	85.68
1715	4	20	26/34	.035"	.260"	89.01
1716	5	20	26/34	.035"	.275"	108.10
1717	6	20	26/34	.035"	.300"	279.64
1719	8	20	26/34	.035"	.330"	379.34
1721	10	20	26/34	.035"	.375"	466.75
1723	12	20	26/34	.035"	.380"	737.66
1726	15	20	26/34	.035"	.410"	1143.95
1728	20	20	26/34	.035"	.455"	1490.28

PLASTIC SPEAKER CABLE COLORED AND CLEAR INSULATION

Conductors parallel, stranded bare copper, color-coded polyvinylchloride insulation, conductors separate easily when slit apart. Designed for hi-fi speaker cable, miniature jukebox speaker connection and rear auto speaker extension cable. Clear insulation will blend with interior room decor. **Operating Temperature:** -20°C to +80°C, 300V. **Stock Colors:** Alpha No. 1944, brown, black, white, gray, tan. 1945, clear. 1948, gray. 1949, gray, clear. 1977, brown, black, white, gray, clear. 1979, clear.

Alpha no.	Conductors			Nominal O.D.	Price per 100 Ft. Spool [‡]
	No.	Size	Strand		
1944	2*	24	7/32	.057" x .120"	\$14.92
1945	2*	24	7/32	.057" x .120"	14.77
1977	2	18	41/34	.155" x .215"	28.43
1979†	2	18	41/34	.155" x .215"	32.96

*1 conductor tinned, 1 bare. †UL Listed. ‡Also available in spool of 500 ft.; prices on request.

SPIRAL SHIELDED JACKETED CABLE



Tinned copper, stranded conductor with color-coded polyvinylchloride insulation. Conductors twisted with spiral wrapped copper shield and gray polyvinylchloride jacket overall. Shield permits pigtail soldering. Strong and flexible for PA, sound, studio, amateur and similar applications. **Shield Coverage:** 95%. **Jacket:** .016" thick, nominal. **Operating Temperature:** -20°C to +80°C. **Color Code:** 1-black, 2-red, 3-white, 4-green, 5-yellow, 6-blue.

Alpha No.	Conductors			Work'g Volts	Nom. O.D.	Price per 100 Ft. Spool [‡]
	No.	Size	Stand			
2254/1	1	22	7/30	350	.115"	\$ 39.82
2254	2	22	7/30	350	.175"	25.56
2254/3	3	22	7/30	350	.190"	71.91
2254/4	4	22	7/30	350	.200"	121.55
2254/6	6	22	7/30	350	.235"	168.64
2256/1	1	20	10/30	350	.130"	44.66
2256	2	20	10/30	350	.195"	52.84
2256/3	3	20	10/30	350	.210"	82.66
2256/4	6	20	10/30	350	.225"	168.80
2256/6	4	20	10/30	350	.265"	219.19
2258/1	1	18	16/30	350	.135"	58.89
2258	2	18	16/30	350	.230"	51.16
2258/3	3	18	16/30	350	.235"	66.75
2258/4	4	18	16/30	350	.245"	81.44
2260	2	16	26/30	350	.240"	66.16
2260/3	3	16	26/30	350	.245"	193.92

*Jacket, .020" thick nom. ‡Also available in spool of 500 ft.; prices on request.

MULTIPAIR CABLE INDIVIDUALLY FOIL SHIELDED UL STYLE 2464, 80°C, 300 V PVC



Stranded, tinned copper conductors with color-coded .016" nom.; PVC insulation. Twisted into pairs; mylar/aluminum foil shield with tinned copper drain wire. Gray PVC jacket.

Alpha No.	No. of Pairs	Jkt. Thk. (In.)	Nom. O.D. (In.)	Price per 100 Ft. Spool
22 AWG—7/30 STRAND				
6052C	2	.043	.316	\$ 47.57
6053C	3	.043	.331	70.30
6054C	4	.043	.360	94.00
6056C	6	.053	.431	147.65
6059C	9	.053	.500	216.73
6059/11C	11	.053	.551	258.62
6059/15C	15	.053	.606	311.96
6059/19C	19	.063	.646	466.50
6059/27C	27	.063	.776	675.59
6059/51C	51	.075	.970	1272.92
18 AWG—16/30 STRAND				
6062C	2	.043	.381	\$ 82.39
6063C	3	.053	.421	99.97
6064C	4	.053	.456	142.45
6066C	6	.053	.526	222.40
6069C	9	.063	.628	335.05
6069/15C	15	.063	.766	556.82

**BE SURE TO WATCH FOR OUR
"POWER SOURCE" BROCHURES.**

SHIELDED MICROPHONE CABLE

STANDARD DUTY, PLASTIC JACKET



Nos. 1702-1706: Single stranded tinned copper conductor with white polyethylene insulation; braided or spiral-wrapped tinned copper shield and gray PVC jacket overall. For all high impedance mikes or for hi-fi interconnection. **Nos. 1709-1712:** Each conductor stranded tinned copper with color-coded (1 = white, 2 = black) polyethylene insulation. Braided or spiral-wrapped tinned copper shield and gray polyvinylchloride jacket overall. For all low impedance mikes. **Operating Temperature:** -20°C to +60°C. Rated 1000 volts except 1703, 3500 volts; 1704, 5000 volts; 1706, 4000 volts; 1712, 6000 volts.

Alpha No.	Conductors			pF/Ft.*	Nom. O.D.	Price per 100 ft. Spool
	No.	Size	Strand			
1702+	1	26	7/34†	38	.110"	\$55.14
1703	1	24	10/34	35	.145"	55.14
1704**	1	24	10/34	23	.190"	52.81
1705+	1	24	10/34	45	.110"	67.61
1706**	1	20	26/34	36	.175"	99.25
1709+	2	24	10/34	38	.190"	92.07
1710	2	22	14/34	31	.230"	59.67
1712	2	20	26/34	45	.245"	89.11

*Nom. capacitance between one conductor and remaining ones connected to shield. †Three strands tinned copper; 4 strands tinned Copper-weld. ‡Spiral-wrapped shield; all others braided. **UL Style 1150.

RUBBER AND NEOPRENE JACKETS

Each conductor stranded tinned copper with color-coded (1 = Black, 2 = White) rubber insulation, cotton wrap; braided tinned copper shield, and tough black rubber or neoprene jacket overall. Rubber jacket type suited for standard-duty indoor use; neoprene type for heavy-duty outdoor use and direct burial. **Operating Temperature:** -20°C to +60°C. 600 volts.

1250	2	20	26/34	.....	.26	\$ 94.61
1251	3	20	26/34	.....	.27	93.55
1252	4	20	26/34	.....	.29	105.46
1253	5	20	26/34	.....	.31	165.22
1254	6	20	26/34	.....	.34	189.39
1255	7	20	26/34	.....	.34	211.69
1255/8	8	20	26/34	.....	.36	236.30
1450#	2	18	41/34	.....	.29	242.71
1450/16#	2	16	65/34	.....	.88	443.75
1454/16#	6	16	65/34	.....	1.02	1123.72

#Neoprene jacket; all others rubber.

UNSHIELDED CONTROL & AUDIO CABLE, UL2463, 600 VOLTS, 80°C

Each conductor, stranded tinned copper, color coded PVC insulation with Mylar wrap, chrome gray PVC jacket overall. **Working voltage:** 600 volts. **Operating Temperature:** -20°C to +80°C. Inner conductor meet UL Style 2463. Used as industrial control cable for telemetry and automatic control; communications and signaling.

Alpha No.	No. of Jacket Conductors	Jacket Thickness	O.D.	Price per 100 Ft. Spool§
16 GAUGE—19/29 STRANDING, INSUL. THICKNESS, 1/32"				
1064	4	.045"	.40	\$ 85.91
1065	5	.045"	.44	108.67
1067	7	.045"	.48	161.11
1069	9	.045"	.59	199.01
1072	12	.060"	.65	255.40
1075	15	.060"	.73	390.67
1079	19	.065"	.78	472.60
1085	25	.080"	.93	542.92

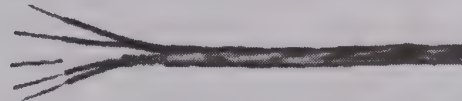
14 GAUGE—19/27 STRANDING, INSUL. THICKNESS, 3/64"				
1274	4	.045"	.49	\$153.46
1275	5	.060"	.57	193.82
1277	7	.060"	.62	278.80
1279	9	.065"	.74	371.12
1282	12	.080"	.86	488.04
1285	15	.080"	.95	628.66

COLOR CODE OF CONDUCTORS

No.	Color	No.	Color	No.	Color	No.	Color	No.	Color
1	Black	6	Blue	11	Blue/Blk	16	Blk/Red	21	Orng/Grn
2	White	7	Wh/Blk	12	Blk/Wh	17	Wh/Red	22	Blk/Wh/Red
3	Red	8	Red/Blk	13	Red/Wh	18	Orng/Red	23	Wh/Blk/Red
4	Green	9	Grn/Blk	14	Grn/Wh	19	Blue/Red	24	Red/Blk/Wh
5	Orange	10	Orng/Blk	15	Blue/Wh	20	Red/Grn	25	Grn/Blk/Wh

§ Also available in spool of 500 or 1000 ft.; prices on request.

SHIELDED & UNSHIELDED INTERCOM CABLE



Each conductor stranded, tinned copper, color-coded PVC or PP insulation, braided tinned or aluminum-Mylar® foil shield over conductors. Unshielded conductors paired. Gray jacket overall. Cond. 22 AWG. 7/30 stranded (1243/3, 2465, 20 AWG, 7/28). Jacket .020" nom. (2464, .019; 1243/3, .029"; 2465, .030"). Inner cond. meet UL 1007 and VH-1. Rated 300 V. **Operating Temperature:** -20°C to +80°C.

Alpha No.	Conductors			Color-Coded		Price per 100 Ft. Spool
	No.	No. Shielded	Nom. O.D.	In Shield	Not Shielded	
2464C	4	2*	.165"	Red, Blk.	Grn., Wh.	\$39.76
1243/4	4	2	†	Blk., Wh.	Blk., Red	54.57
1243/5	5	3	‡	Blk., Wh., Red	Blk., Red	99.36
1243/3C	3	2*	.121"	Blk., Red	White	33.07
2465C	4	2*	.233"	Blk., Red	Grn., Wh.	40.47

*Polypropylene insulation, aluminum-Mylar® foil shielded, solid tinned copper drain for grounding; all others PVC, braided shield. †Oval, .285" x .180". ‡Oval, .200" x .300".

BRAIDED SHIELDED JACKETED CABLE

UL 1108, 2095

Tinned copper, stranded or solid conductor with color-coded polyvinylchloride insulation. Conductors twisted with braided copper shield and gray polyvinylchloride jacket overall. Shield permits pigtail soldering. Strong and flexible for PA, sound, studio, amateur and similar applications. Shield coverage, 75% Jacket .016" thick, nom. **Operating Temperature:** -20°C to +80°C. 300 volt. **Color Code:** 1 = black; 2 = red; 3 = white; 4 = green.

Alpha No.	Conductors			Work'g Volts	Nom. O.D.	Price per 100 Ft. Spool
	No.	Size	Strand			
1735	1	22	7/30	350	.125"	\$ 59.36
1736C	2	22	7/30	350	.185"	49.73
1737C	3	22	7/30	350	.200"	48.14
1738C	4	22	7/30	350	.210"	77.12
1740	1	20	10/30	350	.135"	58.73
1741C	2	20	10/30	350	.135"	83.96
1742C	3	20	10/30	350	.220"	100.18
1743C	4	20	10/30	350	.230"	102.65
1745	1	18	16/30	350	.145"	64.18
1746C	2	18	16/30	350	.235"	104.99
1747C	3	18	16/30	350	.245"	147.69
1747/4C	4	18	16/30	350	.255"	193.65
1748C	2	16	26/30	350	.250"	151.73
1749C	3	16	26/30	350	.255"	206.89
1750	2	14	41/30	450	.290"	188.16
1751	3	14	41/30	450	.295"	288.53
1760	2	12	65/30	450	.335"	305.78
1761	3	12	65/30	450	.340"	438.25
1775C	2	22	Solid	350	.175"	46.55

HI-FI AND STEREO INTERCONNECTING CABLE PHONO WIRE

Each conductor stranded tinned copper, color coded polyvinylchloride insulation, conductors twisted. Alpha Nos. 1101-1102, conductors twisted with extra tight lay for flexibility. Overall shield designed for extreme limpness so not to impede phono arm when tracking. **Operating Temperature:** -55°C to +80°C. **Working Voltage:** 200 V.

Alpha No.	Conductors			Nom. O.D.	Color Code	Price per 100 Ft. Spool
	No.	Size	Strand			
1115	2	30	7/38	.065"	1-2	\$58.29
1116	3	30	7/38	.070"	1-3	63.43

STEREO (UNSHIELDED)

1101	3	32	7/40	.053"	1-3	\$67.66
1102	4	32	7/40	.061"	1-4	79.48

COAXIAL CABLE—INDOOR NEC TYPE CL2

Alpha No.	RG Type	UL Style No.	Conductor				Dielectric		Shield		Jacket*		Impedance (@ 1 MHz (Ohms)	V _p %	Price per 100 ft.
			AWG	mm ²	Strand	Mat'l.	Mat'l.	Dia. (In.)	Mat'l.	Coverage %	Mat'l.	Dia. (In.)			
9059	59 U	1354	22	0.324	Solid	CW	PE	0.146	BC Braid	95	PVC	0.242	75	66	\$33.64
9059C	59 U	1354	22	0.324	Solid	CW	PE	0.146	BC Braid	95	PVC	0.242	75	66	34.93

*9059 Colors Available: White, black, red, green, yellow, blue, gray. JAN-C-17A. 'C' suffix indicates CL2 rating.

75 OHM PRECISION COAX VIDEO CABLE—INDOOR

Alpha No.	RG Type	UL Style No.	Conductor				Dielectric		Shield		Jacket*		Impedance (@ 1 MHz (Ohms)	V _p %	Price per 100 ft.
			AWG	mm ²	Strand	Mat'l.	Mat'l.	Dia. (In.)	Mat'l.	Coverage %	Mat'l.	Dia. (In.)			
9807	Video Coax	.....	20	0.519	Solid	C	PE	0.200	Double TC Braid	99	Black PE	0.304	75	66	\$ 79.86
9808	Video Coax	.....	20	0.519	Solid	C	PE	0.200	Double TC Braid	98	Clear PE	0.304	75	66	101.50
9809	Video Coax	.....	20	0.519	Solid	C	PE	0.200	Double TC Braid	99	Gray MVC	0.304	75	66	126.52
9810	Video Coax	.....	23	0.259	7/32	Compacted C	Black PE	0.146	AMA + TC Braid	100	Black PE	0.220	75	66	69.18

*Colors Available: Black, red, green, yellow, blue. 100% Sweep Test (@ 5 to 300 MHz).

75-OHM PRECISION COAX VIDEO CABLE—EXTRA FLEXIBLE

Alpha No.	RG Type	UL Style No.	Conductor				Dielectric		Shield		Jacket*		Impedance (@ 1 MHz (Ohms)	V _p %	Price per 100 ft.
			AWG	mm ²	Strand	Mat'l.	Mat'l.	Dia. (In.)	Mat'l.	Coverage %	Mat'l.	Dia. (In.)			
9259	59B/U	.....	24	0.227	7/32	BC	PE	0.142	BC Braid	95	PVC	0.240	75	66	\$568.00
9813	Video Coax	.....	22	0.360	7/30	C	PE	0.193	Double TC Braid	Inner, 95 Outer, 92	PVC	0.303	75	66	986.53

*Colors Available: Black, red, green, blue, yellow.

EXTRA FLEXIBLE MICROPHONE CABLE

No. 1771: Alpha 1771 cable is a standard, 2-conductor microphone cable intended for general audio applications. This outstanding general microphone cable utilizes inner conductors with 60 strands of 40 AWG annealed copper wire for excellent flexibility and termination durability. It will resist breaking even if accidentally nicked.

Alpha No.	Conductor				Insul. Mat'l.	No. of Pairs	Shield		Jacket			Impedance (@ 1 MHz (Ohms)	Price per 100 ft.
	AWG	mm ²	Strand	Mat'l.			Mat'l.	Coverage %	Mat'l.	Thickness (In.)	Dia. (In.)		
1771	23	0.259	60/40	BC	PE	1	TC	94	PVC	0.040	0.298	88	\$71.20

Standard Put-Up: 100 ft., 250 ft., 1000 ft. **Color Code:** White, Blue. **Colors Available:** Black, blue, red, yellow, orange.

No 1772: Alpha 1772 cable is designed for use with microphones, but it is also excellent for line-level signals (i.e. mixers to power amps.) Its STAR QUAD configuration plus high shield density reduce hum and noise to less than 10% that of conventional 2-conductor mic cables. Special construction reduces handling noise while maintaining excellent flexibility.

Alpha No.	Conductor				Insul. Mat'l.	No. of Pairs	Shield		Jacket			Impedance (@ 1 MHz (Ohms)	Price per 100 ft.
	AWG	mm ²	Strand	Mat'l.			Mat'l.	Coverage %	Mat'l.	Thickness (In.)	Dia. (In.)		
1772	24	0.196	40/40	BC	PE	2 (STAR QUAD)	TC Braid	94	PVC	0.044	0.237	44	\$70.01

Standard Put-Up: 100 ft., 250 ft., 1000 ft. **Color Code:** Pair 1, white/white; Pair 2, blue/blue. **Available Colors:** Black, blue, brown, gray, green, orange, purple, red, yellow, white.

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AUDIO CABLE—INDOOR NEC TYPE

MULTI-PAIR, INDIVIDUALLY FOIL SHIELDED

105°C, 200 V. **Insulation Thickness:** 0.008". **Standard Put-Up:** 100 ft., 500 ft., and 1000 ft. **Color Code:** Black and red.

Alpha No.	Conductor				Insul. Mat'l.*	No. of Pairs	Shield		Jacket			Impedance (a 1 MHz (Ohms))	V _p %	Price per 100'
	AWG	mm ²	Strand	Mat'l.*			Mat'l.*	Coverage %	Mat'l.*	Thk. Ins.	Dia. Ins.			
2460C	22	0.324	Solid	TC	PP	1	A/M	100	Gray PVC	0.018	0.136	58	69	\$21.30
2461C	22	0.360	7/30	TC	PP	1	A/M	100	PVC*	0.020	0.130	58	69	22.29

*2461 Colors Available: Black, blue, gray, green, orange, red, yellow, white.

MULTI-PAIR, INDIVIDUALLY FOIL SHIELDED

105°C, 400 V. **Insulation Thickness:** 2463 and 2466, 0.008"; 2467, 0.015". **Standard Put-Up:** 100 ft., 500 ft., and 1000 ft. **Color Code:** Pair 1, red and black; pair 2, green and white; pair 3, white/red and white/black; pair 4, white/green and white/yellow.

Alpha No.	Conductor				Insul. Mat'l.*	No. of Pairs	Shield		Jacket			Impedance (a 1 MHz (Ohms))	V _p %	Price per 100'
	AWG	mm ²	Strand	Mat'l.*			Mat'l.*	Coverage %	Mat'l.*	Thk. Ins.	Dia. Ins.			
2463C	22	0.360	7/30	TC	PP	4	A/M	100	Gray PVC	0.019	0.230	58	69	\$107.45
2466C	22	0.360	7/30	TC	PP	2	A/M	100	Gray PVC	0.019	0.160	58	69	25.56
2467C	20	0.560	7/28	TC	PP	4	A/M	100	Gray PVC	0.019	0.030	66	69	129.22

†Pairs cabled on common axis to reduce diameter. §Common stranded drain wire, 24 AWG.

MULTI-PAIR, INDIVIDUALLY FOIL SHIELDED NEC TYPE CL2

60°C, 300 V. **Insulation Thickness:** 0.010", UL Style 2493. **Standard Put-Up:** 100 ft., 500 ft., and 1000 ft. **Color Code:** See chart below.

Alpha No.	Conductor				Insul. Mat'l.*	No. of Pairs	Shield		Jacket			Impedance (a 1 MHz (Ohms))	V _p %	Price per 100'
	AWG	mm ²	Strand	Mat'l.*			Mat'l.*	Coverage %	Mat'l.*	Thk. Ins.	Dia. Ins.			
6010C	22	0.360	7/30	TC	PP	3	A/M	100	Gray PVC	0.045	0.310	55	69	\$ 50.41
6012C	22	0.360	7/30	TC	PP	6	A/M	100	Gray PVC	0.045	0.390	55	69	88.04
6014C	22	0.360	7/30	TC	PP	9	A/M	100	Gray PVC	0.045	0.460	55	69	161.88
6016C	22	0.360	7/30	TC	PP	11	A/M	100	Gray PVC	0.045	0.480	55	69	199.51
6017C	22	0.360	7/30	TC	PP	12	A/M	100	Gray PVC	0.045	0.480	55	69	213.71
6018C	22	0.360	7/30	TC	PP	15	A/M	100	Gray PVC	0.060	0.560	55	69	238.56
6019C	22	0.360	7/30	TC	PP	17	A/M	100	Gray PVC	0.060	0.610	55	69	312.40
6020C	22	0.360	7/30	TC	PP	19	A/M	100	Gray PVC	0.060	0.630	55	69	310.98
6022C	22	0.360	7/30	TC	PP	27	A/M	100	Gray PVC	0.060	0.680	55	69	434.52

AUDIO CABLE—RUGGED OUTDOOR NEC TYPE CL2

MULTI-PAIR, INDIVIDUALLY FOIL SHIELDED

80°C, 400 V. **Insulation Thickness:** 0.008". **Standard Put-Up:** 1000 ft. **Color Code:** Black/red and white/green.

Alpha No.	Conductor				Insul. Mat'l.*	No. of Pairs	Shield		Jacket			Impedance (a 1 MHz (Ohms))	V _p %	Price per 1000'
	AWG	mm ²	Strand	Mat'l.*			Mat'l.*	Coverage %	Mat'l.*	Thk. Ins.	Dia. Ins.			
2462§	22	0.360	7/30	TC	PP	2	A/M	100	Heavy Duty PU	0.019	0.160	58	69	\$264.30

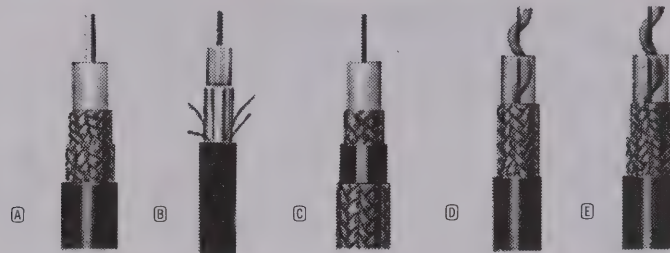
§Common stranded drain wire, 24 AWG. *A/M—Aluminum/polyester tape; PP—Polypropylene; PU—Polyurethane; PVC—Polyvinylchloride; TC—Tinned copper.

CHART 1

MULTI-PAIR CABLE COLOR CODES

Pair No.	Color Configuration	Pair No.	Color Configuration	Pair No.	Color Configuration	Pair No.	Color Configuration
1	Black paired with Red	14	Green paired with Blue	27	Brown paired with Yellow	40	Slate paired with Blue
2	Black paired with White	15	Green paired with White	28	Purple paired with Red	41	Slate paired with Brown
3	Black paired with Green	16	Green paired with Brown	29	Purple paired with White	42	Slate paired with Yellow
4	Black paired with Blue	17	Green paired with Orange	30	Purple paired with Green	43	Slate paired with Orange
5	Black paired with Brown	18	Green paired with Yellow	31	Purple paired with Blue	44	Slate paired with Black
6	Black paired with Yellow	19	White paired with Blue	32	Purple paired with Brown	45	White/Black paired with Red
7	Black paired with Orange	20	White paired with Brown	33	Purple paired with Yellow	46	White/Black paired with Green
8	Red paired with Green	21	White paired with Orange	34	Purple paired with Orange	47	White/Black paired with Blue
9	Red paired with White	22	White paired with Yellow	35	Purple paired with Slate	48	White/Black paired with Brown
10	Red paired with Blue	23	Blue paired with Brown	36	Purple paired with Black	49	White/Black paired with Yellow
11	Red paired with Yellow	24	Blue paired with Orange	37	Slate paired with Red	50	White/Black paired with Orange
12	Red paired with Brown	25	Blue paired with Yellow	38	Slate paired with White	51	White/Black paired with Purple
13	Red paired with Orange	26	Brown paired with Orange	39	Slate paired with Green		

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POLYETHYLENE DIELECTRIC RG/U COAXIAL CABLES

Factory tested to assure physical and electrical performance. Production runs are subjected to electrical property tests to determine capacitance, impedance and attenuation. Further tests are made for corona extinction and physical properties. Dielectrics and insulating jackets are subjected to aging and flow test in a special forced-draft oven; plus, exposure to extreme low temperatures in sub-zero environmental chamber to determine cold-bend properties. All have solid polyethylene dielectric (VP, 65.9%) except as noted. Dimensions shown are max.

Mfr. No.	MIL No. RG-	Fig.	Center Conductor			Shields*		Jacket		Oper. Volts rms	Nom. Imped. Ohms	Cap., pF/ft.	Price per Put-Up 100 ft.
			Mat.*	Strand	O.D. (In.)	1st	2nd	Mat.*	O.D. (In.)				
9006A	6A/U	A	CW	Solid	.0285	SC	C	NCV	.336	2700	75	20	\$127.98
9008	8/U	B	C	7/.0285	.086	C	.....	V	.415	5000	52	29.5	67.65
9008A	8A/U	B	C	7/.0285	.086	C	.....	NCV	.415	5000	52	29.5	92.30
9009B	9B/U	A	SC	7/.0285	.086	SC	SC	NCV	.430	5000	50	30	435.13
9011	11/U	B	TC	7/.0159	.048	C	.....	V	.415	5000	75	20.5	71.00
9011A	11A/U	B	TC	7/.0159	.048	C	.....	NCV	.412	5000	75	20.5	80.94
9055	55/U	A	C	Solid	.032	TC	TC	NP	.206	1900	53.5	28.5	87.03
9055B	55B/U	A	SC	Solid	.032	TC	TC	BP	.206	1900	53.5	28.5	99.60
9058	58/U	B	C	Solid	.032	TC	.....	V	.200	1900	53.5	28.5	34.01
9058A	58A/U	B	TC	19/.0071	.0375	TC	.....	V	.199	1900	50	29.5	28.40
9058C	58C/U	B	TC	19/.0071	.0375	TC	.....	NCV	.199	1900	50	29.5	29.82
9059	59/U	B	CW	Solid	.0253	C	.....	V	.250	2300	73	21	33.64
9059B	59B/U	B	CW	Solid	.023	C	.....	NCV	.246	2300	75	20.5	57.34
9062	62/U	D	CW	Solid	.025	C	.....	V	.250	750	93	13.5	51.77
9062A	62A/U	D	CW	Solid	.025	C	.....	V	.249	750	93	13.5	33.94
9063B	63B/U	D	CW	Solid	.0253	C	.....	NCV	.415	1000	125	10	73.13
9071B	71B/U	E	CW	Solid	.025	C	TC	BP	.250	750	93	13.5	64.06
9174	174/U	B	CW	7/.0063	.019	TC	.....	V	.105	1500	50	30	33.64
9213	213/U	B	C	7/.0296	.090	C	.....	NCV	.412	5000	50	30.5	95.07
9214	214/U	A	SC	7/.0296	.090	SC	SC	NCV	.432	5000	50	30.5	493.63
9217	217/U	A	C	Solid	.106	C	C	NCV	.555	7000	50	30	298.37
9223	223/U	A	SC	Solid	.036	SC	SC	NCV	.216	1900	50	30	184.60

MINIATURE TEFLON® COAXIAL CABLES

Operating Temperature: -65°C to +200°C.

Mfr. No.	MIL No. RG-	Fig.	Center Conductor			Shields*		Jacket		Oper. Volts rms	Nom. Imped. Ohms	Cap., pF/ft.	Price per Put-Up 100 ft.
			Mat.*	Strand	O.D. (In.)	1st	2nd	Mat.*	O.D. (In.)				
9178B	178B/U	C	SCW	7/.004	.....	SC	.....	FEP	.075	1000	50 ± 2	27.9	\$ 88.92
9179B	179B/U	C	SCW	7/.004	.....	SC	.....	FEP	.105	1200	75 ± 3	20.4	108.09
9180B	180B/U	C	SCW	7/.004	.....	SC	.....	FEP	.145	850	93 ± 2	15.3	181.80
9187A	187A/U	C	SCW	7/.004	.....	SC	.....	TFE	.110	1200	75 ± 3	19.5	120.52
9188A	188A/U	C	SCW	7/.0067	.....	SC	.....	TFE	.110	1200	50 ± 2	27.5	116.71
9196A	196A/U	C	SCW	7/.004	.....	SC	.....	TFE	.080	1000	50 ± 2	28.5	85.27

UL STYLE 1354, 1478 93-OHM FLEXIBLE COAXIAL CABLE

Mfr. No.	MIL No. RG-	Center Conductor			Di-electric	Shields*		Jacket		Oper. Volts rms	Nom. Imped. Ohms	Cap. pF/ft.	Price per Put-Up 100 ft.
		Mat.*	Strand			1st	2nd	Mat.*	O.D. (In.)				
9062A	62A/U	CW	Solid	SSP	C	.....	.....	PVC	.242	750	93	13.5	\$ 33.94
9805	62A/U	CW	Solid	SSP	C	.....	.....	PVC	.260	750	93	13.5	53.53
9162	62A/U	C	Solid	SST	C	.....	.....	FEP	.225	750	93	13.5	305.30†
9806	.....	SC	Solid	FPE	A/M	.....	.....	PVC	.115	1500	93	14.0	40.37

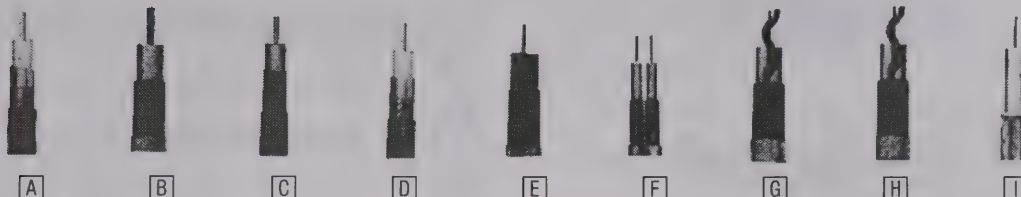
†Put up of 500 ft.

UL STYLE 1354 75-OHM FLEXIBLE COAXIAL CABLE

Mfr. No.	MIL No. RG-	Center Conductor			Di-electric	Shields*		Jacket		Oper. Volts rms	Nom. Imped. Ohms	Cap. pF/ft.	Price per Put-Up 100 ft.
		Mat.*	Strand			1st	2nd	Mat.*	O.D. (In.)				
9803C	59/U	C	7/30	FPE	C	.....	.....	PVC	.242	2100	75	17.3	\$ 54.41
9159	59B/U	CW	Solid	FEP	C	.....	.....	FEP	.215	2100	75	20.5	367.78†
9843	6/U	C	Solid	FPE	A/M	.....	.....	PVC	.242	2500	75	17.3	36.12
9804C	6/U	C	Solid	FPE	A/M	TC	TC	PVC	.270	2500	75	17.3	43.88
9807	.....	C	Solid	PE	TC	TC	TC	PE	.304	.....	75	21.0	79.86
9475	.....	SC	Solid	FPP	A/M	.....	.....	LM	.065	1000	75	.....	266.34
9845	59B/U	CW	Solid	PE	C	.....	.....	NCV	.242	.....	75	20.5	52.54

*Materials—A/M, aluminum/polyester; BP, black polyethylene; C, Copper; CW, copper-covered steel; FEP, natural fluorocopolymer; FPE, cellular (foam) polyethylene. LM, laminated Mylar®; NCV, non-contaminating polyvinylchloride; NP, natural polyethylene; PVC, polyvinylchloride; SC, silver-colored copper; SCW, silver-plated Copperweld®; SSP, semisolid polyethylene; SST, semi-solid Teflon®; TC, tinned copper; TFE, fused TFE Teflon® tape; V-polyvinylchloride, type 1. †Put up of 500 ft.

COAXIAL CABLES NEC 725-38(b)(3), UL SUBJECT 13, PLCC TYPE CL2P



Alpha No.	MIL No. RG.	Nom. Imped. Ohms	Cap., pF/Ft.	Fig.	Center Conductor			Shields		Jacket		Price per 1000 Ft.
					Mat.*	Strand	AWG	1st	2nd	Mat.*	O.D., (In.)	
9101	59B/U	75	19.7	F	CW	Solid	23	FC	.....	.200 × .450	.230 × .435	\$1547.80
9102	59/U	75	16.5	D	CW	Solid	20	FC	TC	.212	.218	653.20
9105	11/U	75	16.5	A	C	Solid	14	FC	TC	.353	.375	1860.20
9158	58C/U	53	29.0	B	TC	19/0.0071	20	FC	.....	.171	.188	639.00
9158S	58/U	53	29.5	C	C	Solid	20	FC	.....	.158	.178	545.28
9159	59B/U	75	19.7	E	CW	Solid	23	FC	.....	.188	.215	735.56
9162	62A/U	93	12.8	G	CW	Solid	22	FC	.....	.204	.225	610.60
9162F	62A/U	93	12.8	H	CW	Solid	22	FC	.....	.199	.225	454.40

*Legend

C—Bare copper
TC—Tinned copper
CW—Copper coated steel
FEP—Fluorinated ethylene propylene
FFEP—Foam fluorinated ethylene-propylene
SST—Semi-Solid Teflon®

AM—Aluminum polyester tape
DW—Drain wire
A/M/A—Aluminum polyester aluminum tape

Applicable Specifications

- UL Subject 13, Type PLCC Listed
- UL Classified (for plenum applications without conduit)

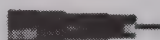
- NEC 725-38(b)(3), UL Listed as Class 2 Power Limited Circuit Cable Type CL2P

Electrical Characteristics

- Operating Temperature Range: -55°C to +200°C
- Suggested Operating Voltage: RG 11/U, RG 58/U, RG 59/U-300 Volts, RG 62/U-150 Volts



J



K



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LOCAL AREA NETWORK CABLES—LAN NEC 725-38(b)(3), UL SUBJECT 13, PLCC TYPE CL2P IEEE-802

Alpha No.	MIL No. RG-	Fig.	Center Conductor			Shields		Jacket		Nom. Imped. Ohms	Cap., pF/Ft.	Price per 1000 Ft.
			Mat.*	Strand	AWG	1st	2nd	Mat.*	O.D., (In.)			
9104	6/U	J	C	Solid	18	A/M/A	TC	FEP	0.249	75	17.0	\$ 979.80
9851F	6/U	K	C	Solid	.0855	A/M/A	A/M/A	FEP	0.375	50	24.9	1533.60
9859	58C/U	L	TC	19/0.0071	20	A/M/A	TC	FEP	0.165	50	25.0	468.60
9861C	58 C/U	L	TC	19/32	20	A/M/A	TC	Gray	0.182	50	24.5	207.32
9888C	Appletalk	L	TC	7/30	22	TC	.....	PVC	0.185	78	19.7	254.18

TWINAXIAL CABLES NEC 725-38(b)(3), UL SUBJECT 13, PLCC TYPE CL2P

Alpha No.	Type	Nom. Imped. Ohms	Center Conductor			Shields*		Jacket		Price per 1000 Ft.
			Mat.*	Strand	AWG	1st	2nd	Mat.*	O.D., (In.)	
9108	2 Cdrs TC	78	FEP®	7/28	20	TC	.....	FEP	.222	\$ 792.59
9109	2 Cdrs BC & TC	100	FEP	7/28	20	TC	.....	FEP	.282	937.20
9110	4 Cdrs	100	FEP	Solid	22	TC	A/M & DW	FEP	.275	1225.66

Applicable Specifications

- UL Subject 13, Type PLCC Listed
- UL Classified (for plenum applications without conduit)
- NEC 725-38(b)(3), UL Listed as Class 2 Power Limited Circuit Cable Type CL2P

Product Characteristics

- Plenum rated for use without conduit
- Passes Steiner Tunnel Test (low smoke and flame generation)

Passes UL VW-1 flame test

- Excellent weatherability and aging
- Outstanding resistance to moisture

MULTICONDUCTOR UNSHIELDED, SOLID CONDUCTOR

NEC 725-83(b)(3), UL SUBJECT 13, PLCC TYPE CL2P

Alpha No.	Number of Conds.	Cond. AWG Size	Nom. Jkt. Thk. (In.)	O.D. (In.)	Price per 1000 Ft.
58032	2	18	0.017	0.14	\$403.28
58033	3	18	0.017	0.15	343.64
58034	4	18	0.017	0.16	414.64
58036	6	18	0.017	0.19	532.50
58042	2	16	0.017	0.16	369.20
58044	4	16	0.017	0.19	566.58

THROUGH OUR BUYING GROUP ASSOCIATION WITH EDBA WE CAN OFFER
YOU ACCESS TO MANY LINES NOT SHOWN IN THIS CATALOG.



Description

- Conductors: Stranded tinned copper
- Insulation: Color coded fluorocopolymer .007" thickness
- Shield: Aluminum polyester foil with a stranded tinned copper drain wire
- Jacket: Fluorocopolymer

Applicable Specifications

- UL Classified (for plenum applications without conduit)
- UL Type CL2P

Product Characteristics

- Plenum rated for use without conduit
- Passes Steiner Tunnel Test (low smoke and flame generation)
- Passes UL910 flame test
- Excellent weatherability and aging characteristics
- Outstanding resistance to moisture

Typical Application

- Remote control
- Intercom systems
- Burglar alarm systems
- Signaling and power limited circuits
- Cash registers
- Other low voltage systems



Description

- Conductors: Stranded tinned copper
- Insulation: Color coded fluorocopolymer .007" thickness
- Shield: Aluminum polyester foil with a stranded tinned copper drain wire
- Jacket: Fluorocopolymer

Applicable Specifications

- UL Classified (for plenum applications without conduit)
- UL Type CL2P

Product Characteristics

- Plenum rated for use without conduit
- Passes Steiner Tunnel Test (low smoke and flame generation)
- Passes UL910 flame test
- Excellent weatherability and aging characteristics
- Outstanding resistance to moisture

MULTICONDUCTOR FOIL SHIELD

NEC 725-50(b), UL SUBJECT 13, CL29 150 VOLT

Alpha No.	Number of Conds.	Cond. AWG Size	Strand	Nom. Jkt. Thk. (In.)	Nom. O. D. (In.)	Price per 1000 Ft.
58401*	2	24	7/32	0.012	0.108	\$ 232.88
58110/25	25	24	7/32	0.012	0.248	1151.62
58411*	2	22	7/30	0.012	0.128	239.98
58113	3	22	7/30	0.012	0.130	306.72
58114	4	22	7/30	0.012	0.148	332.28
58116	6	22	7/30	0.012	0.158	497.00
58117	7	22	7/30	0.012	0.168	535.34
58118	8	22	7/30	0.012	0.178	596.40
58119	9	22	7/30	0.012	0.188	663.14
58120	10	22	7/30	0.012	0.208	708.58
58120/12	12	22	7/30	0.012	0.228	871.88
58120/15	15	22	7/30	0.012	0.278	961.34
58120/25	25	22	7/30	0.012	0.128	1439.88
58421*	2	20	7/28	0.012	0.148	298.20
58124	4	20	7/28	0.012	0.178	400.44
58126	6	20	7/28	0.012	0.148	555.64
58431*	2	18	7/26	0.012	0.155	400.44
58133*	3	18	7/26	0.012	0.170	485.40
58134	4	18	7/26	0.012	0.198	533.92
58142*	2	16	7/0.0152	0.012	0.170	428.84
58144	4	16	7/0.0152	0.012	0.198	735.56

*Color code is black and red.

Cond. No.	Base Color	Cond. No.	Base Color	First Stripe
1	Black	13	White	Blue
2	White	14	White	Orange
3	Red	15	White	Green
4	Green	16	White	Brown
5	Brown	17	White	Gray
6	Blue	18	Red	Blue
7	Orange	19	Red	Orange
8	Yellow	20	Red	Green
9	Violet	21	Red	Brown
10	Gray	22	Red	Gray
11	Pink	23	Green	Blue
12	Tan	24	Green	Orange
		25	Green	Brown

MULTIPAIR OVERALL FOIL SHIELD

NEC 725 (b)(3), UL SUBJECT 13, CL2P 150 VOLT

Alpha No.	Number of Pairs	Cond. AWG Size	Strand	Nom. Jkt. Thk. (In.)	Nom. O. D. (In.)	Nom. Cap. pF/Ft.	Price per 1000 Ft.
58401	1	24	7/32	0.012	0.108	25.3	\$ 232.88
58410/15	15	24	7/32	0.012	0.318	15.3	1479.64
58411	1	22	7/30	0.012	0.114	26.6	239.98
58412	2	22	7/30	0.012	0.128	28.6	379.14
58413	3	22	7/30	0.012	0.138	16.6	653.20
58414	4	22	7/30	0.012	0.158	16.6	585.04
58415	5	22	7/30	0.012	0.148	16.6	732.72
58416	6	22	7/30	0.012	0.188	16.6	834.96
58419	9	22	7/30	0.012	0.228	16.6	1116.12
58420/19	19	22	7/30	0.012	0.338	16.6	2152.72
58421	1	20	7/0.0121	0.012	0.128	31.8	298.20
58431	1	18	7/0.0152	0.012	0.148	35.5	400.44

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.

INSTRUMENTATION CABLES

Constructed with stranded, bare conductors, and black PVC jackets. Pairs color coded black and white. Multi-pairs and multi-triples numbered at 1-inch intervals. Triples color-coded black, white and red. Aluminum-polyester tape shield and drain wire for 100% coverage. A nylon rip cord simplifies jacket removal.

105°C, 300V PVC—SINGLE PAIR, UNSHIELDED



Alpha No.	Conductor		Nom. Jkt. Thickness	Nom. O.D.	Price per Ft.
	Size	Strand			
5600B2001E	20	7/28	.035"	.205"	\$0.60
5600B1801E	18	7/26	.035"	.237"	.68
5600B1601E	16	7/.0192	.035"	.255"	.72

105°C 300V PVC—SINGLE PAIR, SHIELDED



Alpha No.	Conductor		Nom. Jkt. Thickness	Nom. O.D.	Price per Ft.
	Size	Strand			
5610B2401E*	24	7/32	.030"	.159"	\$0.33
5610B2201E	22	7/30	.035"	.191"	.45
5610B2001E	20	7/28	.035"	.207"	.62
5610B1801E	18	7/26	.035"	.239"	.82
5610B1601E	16	7/.0192	.035"	.257"	.88
5610B1401E*	14	19/.0147	.040"	.309"	1.29
5610B1201E*	12	19/.0185	.040"	.347"	1.89

90°C, 600V PVC/NYLON—SINGLE PAIR, SHIELDED

5616B1801	18	7/26	.045"	.279"	\$0.67
5616B1601	16	7/.0192	.045"	.297"	.67
5616B1401	14	19/27	.045"	.327"	1.24
5616B1201	12	19/25	.045"	.365"	1.60

*Not U.L. listed.

105°C, 300V PVC—SINGLE TRIAD, UNSHIELDED



Alpha No.	Conductor		Nom. Jkt. Thickness	Nom. O.D.	Price per Ft.
	Size	Strand			
5630B2001E	20	7/28	.035"	.24"	\$0.60
5630B1801E	18	7/26	.035"	.29"	.88
5630B1601E	16	7/.0192	.035"	.33"	.53

105°C, 300V PVC—SINGLE TRIAD, SHIELDED

5640B2201E	22	7/30	.035"	.23"	\$0.64
5640B2001E	20	7/28	.035"	.26"	.67
5640B1801E	18	7/26	.035"	.29"	.88
5640B1601E	16	7/.0192	.035"	.34"	1.21

105°C, 300V PVC—MULTI-PAIR, INDIVIDUALLY SHIELDED



Alpha No.	No. Pairs	Conductor		Nom. O.D.	Price per Ft.
		Size	Strand		
5620B2002E	2	20	7/28	.365"	\$ 1.21
5620B2004E	4	20	7/28	.442"	2.02
5620B2008E	8	20	7/28	.561"	3.37
5620B2012E	12	20	7/28	.693"	4.60
5620B2016E	16	20	7/28	.766"	6.02
5620B2020E	20	20	7/28	.847"	7.37
5620B2024E	24	20	7/28	.959"	8.90
5620B2036E	36	20	7/28	1.092"	12.20
5620B1602E	2	16	7/.0192	.487"	1.97
5620B1608E	8	16	7/.0192	.787"	5.85
5620B1612E	12	16	7/.0192	.920"	8.51
5620B1616E	16	16	7/.0192	1.021"	11.62
5620B1624E	24	16	19/29	1.297"	13.43

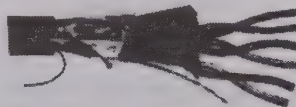
FOR INSULATION SAFETY AND RELIABILITY:

PVC — Passes UL FR-1, vertical flame test. UL listed under subject 13; complies with NEC Article 725.

PE — UL 2667

PVC/Nylon — Passes IEEE 383 vertical flame test. UL listed under subject 1227; complies with NEC Article 340.

105°C, 300V PVC—MULTI-PAIR, OVERALL SHIELDED



Alpha No.	No. Pairs	Conductor		Nom. O.D.	Price per Ft.
		Size	Strand		
5610B2002E	2	20	7/28	.28"	\$ 0.88
5610B2004E	4	20	7/28	.38"	1.55
5610B2008E	8	20	7/28	.47"	2.33
5610B2010E	10	20	7/28	.51"	3.24
5610B2012E	12	20	7/28	.55"	3.72
5610B2016E	16	20	7/28	.63"	4.30
5610B2020E	20	20	7/28	.68"	5.14
5610B2024E	24	20	7/28	.73"	5.94
5610B2036E	36	20	7/28	.87"	8.61
5610B2050E	50	20	7/28	.88"	11.79
5610B1602E	2	16	7/.0192	.38"	1.72
5610B1604E	4	16	7/.0192	.48"	2.61
5610B1608E	8	16	7/.0192	.64"	4.60
5610B1612E	12	16	7/.0192	.74"	6.19
5610B1616E	16	16	7/.0192	.83"	8.07
5610B1624E	24	16	7/.0192	.99"	12.10

90°C, 600V PVC/NYLON—MULTI-PAIR, OVERALL SHIELDED

5616B1602	2	16	7/.0192	.45"	\$ 2.03
5616B1604	4	16	7/.0192	.60"	3.07
5616B1608	8	16	7/.0192	.60"	4.91
5616B1612	12	16	7/.0192	.80"	7.77
5616B1624	24	16	7/.0192	.80"	13.66

90°C, 600V MULTI-PAIR INDIVIDUALLY AND OVERALL SHIELDED



Alpha No.	No. Pairs	Conductors		Nom. O.D.	Price per Ft.
		Size	Strand		
5626B1602	2	16	7/24	.470"	\$ 1.28
5626B1603	3	16	7/.0192	.500"	2.66
5626B1604	4	16	7/.0192	.580"	1.90
5626B1606	6	16	7/.0192	.690"	3.14
5626B1608	8	16	7/.0192	.750"	3.92
5626B1612	12	16	7/.0192	.950"	5.62
5626B1616	16	16	7/.0192	1.060"	7.33
5626B1620	20	16	7/.0192	1.170"	9.66
5626B1624	24	16	7/.0192	1.300"	10.81
5626B1802	2	18	7/26	.440"	.89
5626B1804	4	18	7/26	.510"	1.70
5626B1808	8	18	7/26	.700"	3.08
5626B1812	12	18	7/26	.840"	4.26
5626B1816	16	18	7/26	.970"	5.57
5626B1824	24	18	7/26	1.200"	7.94

90°C, 600V MULTI-TRIAD, INDIVIDUALLY AND OVERALL SHIELDED

5656B1604	4	16	7/.0192	.670"	\$ 4.23
5656B1608	8	16	7/.0192	.920"	6.16
5656B1612	12	16	7/.0192	1.100"	8.46
5656B1804	4	18	7/26	.620"	2.63
5656B1808	8	18	7/26	.800"	4.46
5656B1812	12	18	7/26	1.020"	6.46

105°C, 300V PVC—MULTI-TRIAD, OVERALL SHIELDED



Alpha No.	No. Pairs	Conductor		Nom. O.D.	Price per Ft.
		Size	Strand		
5640B2004E	4	20	7/28	.44"	\$2.10
5640B2012E	12	20	7/28	.68"	5.24



XTRA•GUARD® Cables

XTRA-GUARD 1 GENERAL PURPOSE INDOOR CABLE

UL STYLE 3243
80°C
PCC-FT4

CSA TYPE SR/PVC
300 VOLTS-AWM
300 - CM

- Stranded, tinned, copper conductors
- Color-coded, semirigid PVC insulation
- Clear Mylar® wrap
- Aluminum Mylar foil shield unshielded or Suprashield as indicated
- Overall PVC jacket available in gray, black or sand beige

Suprashield provides maximum shielding effectiveness. It is ideal for use with equipment required to meet FCC Docket 20780. It combines the efficiency of foil shielding with the added mechanical advantage of a woven copper braid.

UNSHIELDED

24 AWG MULTICONDUCTOR (7/32)

Alpha No.	No. of Conds.	Nominal Jacket Thickness, Inches	Nominal O.D. Inches	Price per Foot*
5200C	5	.063	.250	\$ 2.00
5201C	7	.063	.265	2.14
5202C	12	.063	.320	2.93
5203C	15	.063	.340	3.99
5204C	19	.063	.360	4.29
5205C	27	.063	.410	5.68
5206C	37	.063	.445	7.82
5207C	48	.063	.495	9.83
5208C	60	.063	.535	11.67

24 AWG TWISTED PAIRS (7/32)

5230C	5	.063	.345	\$ 3.07
5231C	7	.063	.355	3.22
5232C	12	.063	.455	4.60
5233C	15	.063	.485	5.99
5234C	19	.063	.505	6.76
5235C	27	.063	.575	9.06
5236C	37	.063	.640	12.14
5237C	48	.063	.710	15.21
5238C	60	.063	.760	19.35

22 AWG MULTICONDUCTOR (7/30)

5210C	5	.063	.270	\$ 2.14
5211C	7	.063	.285	2.31
5212C	12	.063	.345	3.22
5213C	15	.063	.370	4.29
5214C	19	.063	.390	4.76
5215C	27	.063	.440	6.29
5216C	37	.063	.490	8.61
5217C	48	.063	.545	10.61
5218C	60	.063	.580	13.36

22 AWG TWISTED PAIRS (7/30)

5240C	5	.063	.370	\$ 3.07
5241C	7	.063	.385	3.54
5242C	12	.063	.485	5.21
5243C	15	.063	.535	6.92
5244C	19	.063	.565	7.68
5245C	27	.063	.645	10.14
5246C	37	.063	.735	13.67
5247C	48	.063	.815	17.66
5248C	60	.063	.915	21.81

20 AWG MULTICONDUCTOR (7/28)

5220C	5	.063	.295	\$ 2.46
5221C	7	.063	.320	2.75
5222C	12	.063	.390	3.85
5223C	15	.063	.415	5.07
5224C	19	.063	.440	5.84
5225C	27	.063	.510	7.68
5226C	37	.063	.560	10.61
5227C	48	.063	.630	13.36
5228C	60	.063	.680	16.29

20 AWG MULTICONDUCTOR (7/28)

5250C	5	.063	.420	\$ 3.68
5251C	7	.063	.435	4.46
5252C	12	.063	.555	6.60
5253C	15	.063	.610	7.99
5256C	37	.063	.890	18.28
5257C	48	.063	.990	23.03
5258C	60	.063	1.065	28.41

SUPRASHIELD

24 AWG MULTICONDUCTOR (7/32)

Alpha No.	No. of Conds.	Nominal Jacket Thickness, Inches	Nominal O.D. Inches	Price per Foot*
5300C	5	.063	.275	\$ 2.61
5301C	7	.063	.290	2.93
5302C	12	.063	.345	3.85
5303C	15	.063	.365	5.07
5304C	19	.063	.380	5.38
5305C	27	.063	.430	7.07
5306C	37	.063	.470	9.67
5307C	48	.063	.520	11.97
5308C	60	.063	.555	14.29

24 AWG TWISTED PAIRS (7/32)

5330C	5	.063	.365	\$ 3.54
5331C	7	.063	.380	4.15
5332C	12	.063	.465	5.84
5333C	15	.063	.510	7.37
5334C	19	.063	.525	8.29
5335C	27	.063	.595	10.91
5336C	37	.063	.670	14.29
5337C	48	.063	.740	17.66
5338C	60	.063	.815	22.11

22 AWG MULTICONDUCTOR (7/30)

5310C	5	.063	.290	\$ 2.93
5311C	7	.063	.310	3.07
5312C	12	.063	.380	4.15
5313C	15	.063	.390	5.38
5314C	19	.063	.410	5.99
5315C	27	.063	.470	7.82
5316C	37	.063	.510	10.61
5317C	48	.063	.570	13.21
5318C	60	.063	.610	15.98

22 AWG TWISTED PAIRS (7/30)

5340C	5	.063	.395	\$ 3.85
5341C	7	.063	.410	4.46
5342C	12	.063	.510	6.60
5343C	15	.063	.555	8.14
5344C	19	.063	.690	8.53
5345C	27	.063	.680	12.28
5346C	37	.063	.770	16.13
5347C	48	.063	.890	20.58
5348C	60	.063	.950	25.35

20 AWG MULTICONDUCTOR (7/28)

5320C	5	.063	.325	\$ 3.22
5321C	7	.063	.345	3.54
5322C	12	.063	.410	4.91
5323C	15	.063	.440	6.46
5324C	19	.063	.465	7.21
5325C	27	.063	.510	9.67
5326C	37	.063	.530	13.06
5327C	48	.063	.585	14.90
5328C	60	.063	.660	19.50

20 AWG MULTICONDUCTOR (7/28)

5350C	5	.063	.440	\$ 4.60
5351C	7	.063	.460	5.68
5352C	12	.063	.580	8.29
5353C	15	.063	.645	10.44
5354C	19	.063	.680	11.97
5355C	27	.063	.785	15.82
5356C	37	.063	.930	21.19
5357C	48	.063	1.030	26.57
5358C	60	.063	1.100	32.40

* Price per foot. Standard put-up: 100, 500, 1000 or cut to specific length.



XTRA•GUARD® Cables

XTRA•GUARD 1 GENERAL PURPOSE INDOOR CABLE

UL STYLE 2464 300 VOLTS-AWM 300 VOLTS CM PCC-FT4

- Stranded, tinned, copper conductors
- Color-coded PVC insulation
- Clear Mylar® wrap
- Overall PVC jacket available in gray, black, or sand beige

Suprashield provides a maximum shielding effectiveness. It is ideal for use with equipment required to meet FCC Docket 20780. It combines the efficiency of foil shielding with the added mechanical advantage of a woven copper braid.

2

UNSHIELDED

Mfr. No.	No. of Conds.	Nom. Jkt. Thk. (In.)	Nom. O.D. (In.)	Price per Ft.
20 AWG 7/28 STRAND				
5052C	2	.032	.210	\$ 0.62
5053C	3	.032	.225	.80
5054C	4	.032	.245	.89
5056C	6	.032	.285	1.21
5058C	8	.032	.315	1.48
5060C	10	.032	.360	1.72
5060/15C	15	.032	.405	2.53
5060/20C	20	.032	.450	3.25
5060/25C	25	.032	.500	4.08
5060/30C	30	.032	.535	4.80
5060/40C	40	.053	.635	6.55
5060/50C	50	.053	.695	8.07
5060/60C	60	.053	.750	9.63
5060/70C	70	.083	.800	11.62
5060/80C	80	.083	.915	13.18
5060/90C	90	.083	.955	14.71
5060/00C	100	.083	1.030	16.30

18 AWG 16/30 STRAND

5062C	2	.032	.230	\$ 0.71
5063C	3	.032	.240	.91
5064C	4	.032	.260	1.14
5066C	6	.032	.310	1.56
5068C	8	.032	.330	1.97
5070C	10	.032	.390	2.31
5070/15C	15	.032	.450	3.37
5070/20C	20	.032	.510	4.44
5070/25C	25	.032	.560	5.54
5070/30C	30	.053	.640	6.76
5070/40C	40	.053	.720	8.85
5070/50C	50	.053	.790	10.96
5070/60C	60	.083	.910	13.55
5070/70C	70	.083	.960	15.75
5070/80C	80	.083	1.020	17.86
5070/90C	90	.083	1.070	19.99
5070/00C	100	.083	1.100	22.10

16 AWG 19/29 STRAND

5072C	2	.032	.260	\$ 0.91
5073C	3	.032	.275	1.22
5074C	4	.032	.300	1.52
5076C	6	.032	.365	2.12
5078C	8	.032	.395	2.70
5080C	10	.032	.455	3.73
5080/15C	15	.032	.515	4.87
5080/20C	20	.053	.610	6.57
5080/25C	25	.053	.680	8.17
5080/30C	30	.053	.725	9.68
5080/40C	40	.083	.875	13.25
5080/50C	50	.083	.960	16.42
5080/60C	60	.083	1.030	19.51

SUPRASHIELD

Mfr. No.	No. of Conds.	Nom. Jkt. Thk. (In.)	Nom. O.D. (In.)	Price per Ft.
20 AWG 7/28 STRAND				
5152C	2	.032	.235	\$ 1.22
5153C	3	.032	.245	1.32
5154C	4	.032	.265	1.52
5156C	6	.032	.315	1.89
5158C	8	.032	.335	2.19
5160C	10	.032	.385	2.60
5160/15C	15	.032	.425	3.66
5160/20C	20	.032	.470	4.59
5160/25C	25	.032	.535	5.65
5160/30C	30	.032	.565	6.55
5160/40C	40	.053	.665	8.56
5160/50C	50	.053	.735	10.27
5160/60C	60	.053	.790	12.07
5160/70C	70	.083	.925	14.60
5160/80C	80	.083	.995	16.37
5160/90C	90	.083	1.000	18.06
5160/00C	100	.083	1.070	20.04

18 AWG 16/30 STRAND

5162C	2	.032	.255	\$ 1.31
5163C	3	.032	.265	1.53
5164C	4	.032	.290	1.80
5166C	6	.032	.340	2.26
5168C	8	.032	.365	2.75
5170C	10	.032	.420	3.45
5170/15C	15	.032	.470	4.73
5170/20C	20	.032	.530	5.99
5170/25C	25	.032	.625	7.48
5170/30C	30	.053	.660	8.68
5170/40C	40	.053	.735	11.10
5170/50C	50	.053	.805	13.31
5170/60C	60	.083	.935	16.69
5170/70C	70	.083	1.015	19.26
5170/80C	80	.083	1.050	21.58
5170/90C	90	.083	1.095	23.93

16 AWG 19/29 STRAND

5172C	2	.032	.285	\$ 1.56
5173C	3	.032	.300	1.93
5174C	4	.032	.330	2.24
5176C	6	.032	.385	3.01
5178C	8	.032	.415	3.82
5180C	10	.032	.480	4.66
5180/15C	15	.032	.545	6.52
5180/20C	20	.053	.645	8.59
5180/25C	25	.053	.720	10.34
5180/30C	30	.053	.760	12.06
5180/40C	40	.083	.910	16.30
5180/50C	50	.083	1.000	19.85
5180/60C	60	.083	1.070	23.46

WE ARE BETTER ABLE TO SERVICE YOUR NEEDS BY BELONGING TO EDNA, A NATIONAL BUYING GROUP.



XTRA•GUARD® Cables

XTRA•GUARD 1 GENERAL PURPOSE INDOOR CABLE



UL Style 2464 CSA Type AWM
300 Volts—AWM
300 Volts—CM
PCC-FT4

FOIL SHIELD

Mfr. No.	No. of Pairs	Nom. Jacket Thick. (In.)	Nom. O.D. (In.)	Price per Ft.
24 AWG—7/32 STRAND				
5491C	1	.032	.165	\$ 0.68
5492C	2	.032	.220	.89
5493C	3	.032	.240	1.11
5494C	4	.032	.275	1.25
5495C	5	.032	.280	1.49
5496C	6	.032	.290	1.66
5499C	9	.032	.360	2.29
5499/11C	11	.032	.375	2.67
5499/15C	15	.032	.430	3.54
5499/19C	19	.032	.445	4.29
5499/27C	27	.032	.515	5.85
5499/51C	51	.053	.715	10.88
5499/77C	77	.085	.910	16.83
5499/02C	102	.085	1.010	22.10

22 AWG—7/30 STRAND

5481C	1	.032	.18	\$ 0.71
5482C	2	.032	.23	.95
5483C	3	.032	.25	1.21
5484C	4	.032	.27	1.43
5485C	5	.032	.29	1.63
5486C	6	.032	.32	1.85
5489C	9	.032	.37	2.58
5489/11C	11	.032	.40	3.01
5489/15C	15	.032	.45	3.99
5489/19C	19	.032	.49	4.90
5489/27C	27	.032	.62	6.86
5489/51C	51	.053	.85	12.43
5489/77C	77	.085	1.00	19.31
5489/02C	102	.085	1.15	25.39

20 AWG—7/28 STRAND

5453C	3	.032	.350	\$ 1.46
5456C	6	.032	.430	2.39
5459C	9	.032	.530	3.28
5459/12C	12	.053	.620	4.19
5459/15C	15	.053	.680	5.38
5459/19C	19	.053	.725	6.56
5459/27C	27	.083	.905	9.53

UL STYLE 2501 CSA TYPE TEW-105 80°C 600 VOLTS MULTICONDUCTOR

SUPRASHIELD

22 AWG—7/30 STRAND				
5504	4	.063	.390	\$ 1.97
5505	5	.063	.420	2.22
5507	7	.063	.450	2.60
5509	9	.063	.510	3.29
5509/12	12	.063	.555	3.91
5509/15	15	.063	.610	4.76
5509/19	19	.063	.650	5.55
5509/25	25	.063	.745	6.89

20 AWG—7/28 STRAND

5514	4	.063	.410	\$ 2.17
5515	5	.063	.440	2.66
5517	7	.063	.470	3.10
5519	9	.063	.535	3.76
5519/12	12	.063	.595	4.60
5519/15	15	.063	.640	5.50
5519/19	19	.063	.685	6.55
5519/25	25	.063	.800	8.72

18 AWG—16/30 STRAND

5524	4	.063	.435	\$ 2.57
5525	5	.063	.465	3.01
5527	7	.063	.500	3.66
5529	9	.063	.570	4.52
5529/12	12	.063	.635	5.59
5529/15	15	.063	.685	6.73
5529/19	19	.063	.735	7.98
5529/25	25	.063	.885	10.42

UNSHIELDED

Mfr. No.	No. of Pairs	Nom. Jacket Thick. (In.)	Nom. O.D. (In.)	Price per Ft.
24 AWG—7/32 STRAND				
5261C	1	.032	.160	\$ 0.58
5262C	2	.032	.215	.71
5263C	3	.032	.235	.91
5264C	4	.032	.270	1.22
5265C	5	.032	.275	1.29
5266C	6	.032	.285	1.52
5269C	9	.032	.355	2.12
5269/11C	11	.032	.370	2.51
5269/15C	15	.032	.425	3.31
5269/19C	19	.032	.440	4.12
5269/27C	27	.032	.510	5.68
5269/51C	51	.050	.710	10.66
5269/77C	77	.080	.905	16.69
5269/02C	102	.080	1.005	22.01

22 AWG—7/30 STRAND

5021C	1	.032	.170	\$ 0.55
5022C	2	.032	.230	.84
5023C	3	.032	.260	1.02
5024C	4	.032	.295	1.24
5025C	5	.032	.310	1.49
5026C	6	.032	.320	1.70
5029C	9	.032	.395	2.43
5029/11C	11	.032	.415	2.87
5029/15C	15	.032	.470	3.82
5029/19C	19	.032	.505	4.73
5029/27C	27	.032	.620	6.76
5029/51C	51	.050	.785	12.31
5029/77C	77	.080	1.000	19.11
5029/02C	102	.080	1.115	25.23

20 AWG—7/28 STRAND

5283C	3	.032	.345	\$ 1.25
5286C	6	.032	.425	2.17
5289C	9	.032	.525	3.12
5289/12C	12	.032	.570	4.08
5289/15C	15	.050	.675	5.20
5289/19C	19	.050	.720	6.45
5289/27C	27	.080	.900	9.37

UNSHIELDED

22 AWG—7/30 STRAND				
5404	4	.063	.370	\$1.22
5405	5	.063	.395	1.36
5407	7	.063	.425	1.68
5409	9	.063	.485	2.06
5409/12	12	.063	.535	2.56
5409/15	15	.063	.575	3.12
5409/19	19	.063	.615	3.76
5409/25	25	.063	.710	4.83

20 AWG—7/28 STRAND

5414	4	.063	.385	\$1.36
5415	5	.063	.415	1.58
5417	7	.063	.445	1.99
5419	9	.063	.510	2.41
5419/12	12	.063	.565	3.04
5419/15	15	.063	.610	3.75
5419/19	19	.063	.650	4.56
5419/25	25	.063	.750	5.88

18 AWG—16/30 STRAND

5424	4	.063	.410	\$1.68
5425	5	.063	.445	1.96
5427	7	.063	.475	2.51
5429	9	.063	.555	3.01
5429/12	12	.063	.605	3.91
5429/15	15	.063	.655	3.55
5429/19	19	.063	.700	5.04
5429/25	25	.063	.810	5.59

Call Your EDBA Distributor For A Complete
Listing Of XTRA•GUARD®

ROBO• GUARD™ SERIES 100

- Temperature rating: -20°C to +105°C
- Minimum continuous flex bend radius: 10 × cable diameter
- Standard colors: black or gray
- Finely stranded bare copper conductors
- PVC insulation
- Low friction tape wrap between layers
- Specially formulated PVC jacket

24 AWG (10/34) 300 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* (500 ft.)
		Thickness (Inches)	Diameter (Inches)	
66124/2	2	0.032	0.18	\$ 895.00
66124/3	3	0.032	0.19	1,130.00
66124/4	4	0.032	0.20	1,365.00
66124/5	5	0.032	0.22	1,600.00
66124/7	7	0.032	0.24	2,065.00
66124/10	10	0.032	0.33	2,775.00
66124/12	12	0.032	0.38	3,020.00
66124/14	14	0.032	0.40	4,600.00
66124/18	18	0.032	0.41	3,260.00
66124/25	25	0.032	0.48	3,750.00

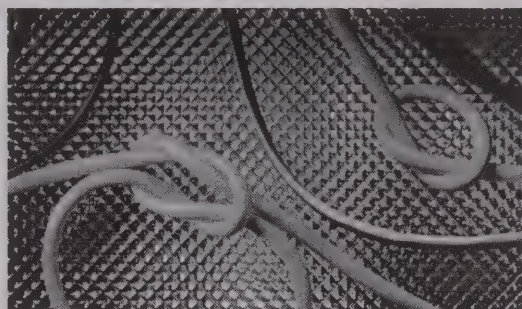
22 AWG (16/34) 300 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* (500 ft.)
		Thickness (Inches)	Diameter (Inches)	
66122/2	2	0.032	0.19	\$ 925.00
66122/3	3	0.032	0.20	1,165.00
66122/4	4	0.032	0.22	1,415.00
66122/5	5	0.032	0.24	1,660.00
66122/7	7	0.032	0.26	2,150.00
66122/10	10	0.032	0.35	2,890.00
66122/12	12	0.032	0.40	3,125.00
66122/14	14	0.032	0.42	3,360.00
66122/18	18	0.032	0.44	3,835.00
66122/25	25	0.032	0.52	4,650.00

20 AWG (26/34) 300 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* (500 ft.)
		Thickness (Inches)	Diameter (Inches)	
66120/2	2	0.032	0.21	\$ 965.00
66120/3	3	0.032	0.22	1,215.00
66120/4	4	0.032	0.24	1,465.00
66120/5	5	0.032	0.26	1,720.00
66120/7	7	0.032	0.28	2,215.00
66120/10	10	0.032	0.41	2,975.00
66120/12	12	0.032	0.44	3,245.00
66120/14	14	0.032	0.45	3,515.00
66120/18	18	0.032	0.49	4,055.00
66120/25	25	0.032	0.62	5,005.00

* Price per ft., cut to specific length. 500' minimum per order.



Robo• Guard™ is a multi-conductor industrial signal and control cable that withstands the stress of continual, vigorous motion in conventional and unusual applications.

18 AWG (41/34) 600 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* (500 ft.)
		Thickness (Inches)	Diameter (Inches)	
66118/2	2	0.063	0.36	\$1,145.00
66118/3	3	0.063	0.38	1,420.00
66118/4	4	0.063	0.41	1,695.00
66118/5	5	0.063	0.44	1,980.00
66118/7	7	0.063	0.47	2,535.00
66118/10	10	0.063	0.62	3,375.00
66118/12	12	0.063	0.68	3,730.00
66118/14	14	0.063	0.71	4,085.00
66118/18	18	0.063	0.76	4,795.00
66118/25	25	0.083	0.95	6,035.00

16 AWG (65/34) 600 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* (500 ft.)
		Thickness (Inches)	Diameter (Inches)	
66116/2	2	0.063	0.38	\$1,280.00
66116/3	3	0.063	0.40	1,535.00
66116/4	4	0.063	0.43	1,790.00
66116/5	5	0.063	0.47	2,045.00
66116/7	7	0.063	0.51	2,555.00
66116/12	12	0.063	0.66	3,840.00
66116/14	14	0.063	0.68	4,155.00
66116/18	18	0.063	0.81	4,770.00
66116/25	25	0.083	1.02	5,860.00
66116/34	34	0.083	1.07	7,255.00

14 AWG (105/34) 600 VOLTS

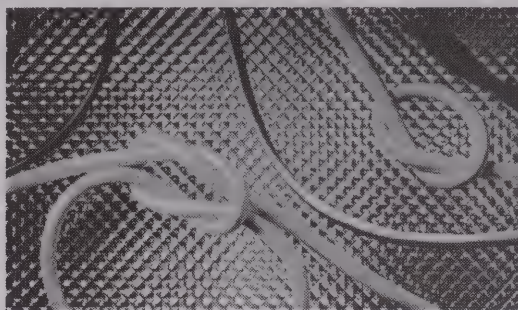
Alpha No.	No. of Cond.	Jacket		Price* (500 ft.)
		Thickness (Inches)	Diameter (Inches)	
66114/2	2	0.063	0.43	\$1,465.00
66114/3	3	0.063	0.45	1,780.00
66114/4	4	0.063	0.49	2,110.00
66114/5	5	0.063	0.53	2,430.00
66114/7	7	0.063	0.58	3,065.00
66114/10	10	0.063	0.72	4,025.00
66114/12	12	0.063	0.75	4,525.00
66114/14	14	0.083	0.90	5,020.00
66114/18	18	0.083	1.00	6,015.00
66114/25	25	0.083	1.16	7,755.00

* Price per ft., cut to specific length. 500' minimum per order.

**WE BELONG TO A NATIONAL BUYING GROUP, EDBA,
THAT GIVES US GREATER PURCHASING POWER
TO ASSURE YOU OF COMPETITIVE PRICES.**

ROBO•GUARD™ SERIES 200

- Temperature rating: -20°C to +90°C
- Minimum continuous flex bend radius: 10 × cable diameter
- Standard colors: black or gray
- Finely stranded bare copper conductors
- PVC insulation
- Low friction tape wrap between layers
- Specially formulated Polyurethane jacket



Robo•Guard™ is a multi-conductor industrial signal and control cable that withstands the stress of continual, vigorous motion in conventional and unusual applications.

26 AWG (28/40) 300 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* 500 ft.
		Thickness (Inches)	Diameter (Inches)	
66226/2	2	0.032	0.17	\$ 950.00
66226/3	3	0.032	0.18	1195.00
66226/4	4	0.032	0.19	1435.00
66226/5	5	0.032	0.21	1675.00
66226/7	7	0.032	0.22	2160.00
66226/10	10	0.032	0.31	2885.00
66226/12	12	0.032	0.32	3130.00
66226/14	14	0.032	0.38	3380.00
66226/18	18	0.032	0.40	3875.00
66226/25	25	0.032	0.45	4745.00

24 AWG (42/40) 300 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* 500 ft.
		Thickness (Inches)	Diameter (Inches)	
66224/2	2	0.032	0.18	\$1010.00
66224/3	3	0.032	0.19	1255.00
66224/4	4	0.032	0.20	1505.00
66224/5	5	0.032	0.22	1755.00
66224/7	7	0.032	0.24	2260.00
66224/10	10	0.032	0.33	3010.00
66224/12	12	0.032	0.39	3295.00
66224/14	14	0.032	0.40	3580.00
66224/18	18	0.032	0.41	4155.00
66224/25	25	0.032	0.48	5155.00

22 AWG (63/40) 300 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* 500 ft.
		Thickness (Inches)	Diameter (Inches)	
66222/2	2	0.032	0.19	\$1100.00
66222/3	3	0.032	0.20	1370.00
66222/4	4	0.032	0.22	1640.00
66222/5	5	0.032	0.24	1915.00
66222/7	7	0.032	0.25	2455.00
66222/10	10	0.032	0.35	3265.00
66222/12	12	0.032	0.40	3570.00
66222/14	14	0.032	0.42	3870.00
66222/18	18	0.032	0.44	4475.00
66222/25	25	0.032	0.51	5530.00

*Priced per ft., cut to specific length; minimum of 500 per order.

20 AWG (105/40) 600 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* 500 ft.
		Thickness (Inches)	Diameter (Inches)	
66220/3	3	0.063	0.36	\$1490.00
66220/4	4	0.063	0.38	1760.00
66220/5	5	0.063	0.41	2030.00
66220/7	7	0.063	0.44	2565.00
66220/10	10	0.063	0.58	3365.00
66220/12	12	0.063	0.58	3500.00
66220/14	14	0.063	0.62	4265.00
66220/18	18	0.063	0.72	5005.00
66220/25	25	0.083	0.91	6305.00
66220/30	30	0.083	0.93	7230.00

18 AWG (168/40) 600 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* 500 ft.
		Thickness (Inches)	Diameter (Inches)	
66218/3	3	0.063	0.38	\$1730.00
66218/4	4	0.063	0.41	2135.00
66218/5	5	0.063	0.45	2540.00
66218/7	7	0.063	0.48	3360.00
66218/10	10	0.063	0.63	4570.00
66218/12	12	0.063	0.69	5390.00
66218/14	14	0.063	0.72	5730.00
66218/18	18	0.063	0.77	6420.00
66218/25	25	0.083	0.96	7625.00
66218/30	30	0.083	1.01	8490.00

16 AWG (259/40) 600 VOLTS

Alpha No.	No. of Cond.	Jacket		Price* 500 ft.
		Thickness (Inches)	Diameter (Inches)	
66216/3	3	0.063	0.40	\$ 2110.00
66216/4	4	0.063	0.44	2450.00
66216/5	5	0.063	0.47	2790.00
66216/7	7	0.063	0.51	3470.00
66216/10	10	0.063	0.66	4500.00
66216/12	12	0.063	0.67	5185.00
66216/14	14	0.063	0.76	5685.00
66216/18	18	0.063	0.82	6695.00
66216/25	25	0.083	1.03	8465.00
66216/34	34	0.083	1.07	10740.00

*Priced per ft., cut to specific length; minimum of 500 per order.

This Is Only A Sample Of ROBO•GUARD™ Cable Available. Call Your EDBA Distributor For A Complete Listing.



SHIELDED TEFLON[®] CABLES MIL-W-16878D TYPE E

- Each conductor stranded silver-plated copper.
- Type E .010" extruded Teflon[®] insulation per MIL-W-16878D.
- Rated-600 volts.
- A silver-plated copper shield is braided over the conductor (s) for 90% coverage.
- **Operating Temperature:** -65°C to +200°C.
- Passes UL VW-1 Flame Test

Alpha No.	No. of Conds.	Size	Strand	Nom. O.D. (in.)	Price per 100 ft. Spool
SHIELDED UNJACKETED					
2809	1	24	19-36	.069	\$ 140.11
2809/2	2	24	19/36	.112	265.47
2809/3	3	24	19/36	.120	336.70
2809/4	4	24	19/36	.132	453.41
2809/5	5	24	19/36	.145	490.11
2809/6	6	24	19/36	.158	595.86
2809/7	7	24	19/36	.158	669.87
2812	1	22	19/34	.075	139.97
2812/2	2	22	19/34	.124	239.57
2812/3	3	22	19/34	.132	392.56
2812/4	4	22	19/34	.146	510.15
2812/5	5	22	19/34	.161	803.11
2812/6	6	22	19/34	.176	946.16
2812/7	7	22	19/34	.176	1054.97
2815	1	20	19/32	.083	153.87
2815/2	2	20	19/32	.142	274.53
2815/3	3	20	19/32	.151	441.71
2815/4	4	20	19/32	.168	562.52
2815/5	5	20	19/32	.182	643.25
2815/6	6	20	19/32	.200	775.04
2815/7	7	20	19/32	.200	887.94
2818	1	18	19/30	.093	229.18
2818/2	2	18	19/30	.162	407.04
2818/3	3	18	19/30	.172	552.86
2818/4	4	18	19/30	.192	816.87
2818/5	5	18	19/30	.212	915.73
2818/6	6	18	19/30	.238	1093.73
2818/7	7	18	19/30	.238	1259.74
2807	1	16	19/29	.103	227.87
2807/2	2	16	19/29	.184	519.52
2807/3	3	16	19/29	.189	673.82
2807/4	4	16	19/29	.209	828.27
2807/5	5	16	19/29	.236	982.73
2807/6	6	16	19/29	.259	1177.83
2807/7	7	16	19/29	.259	1352.76
2806	1	14	19/27	.117	258.58
2806/2	2	14	19/27	.211	509.87
2806/3	3	14	19/27	.230	732.76
2806/4	4	14	19/27	.255	942.79
2806/5	5	14	19/27	.282	1148.44
2806/6	6	14	19/27	.310	1394.44
2805	1	12	19/25	.136	371.36
2805/2	2	12	19/25	.254	739.64
2805/3	3	12	19/25	.271	1075.01
2805/4	4	12	19/25	.300	1388.31

SHIELDED—TFE INSULATION—TFE IMPREGNATED FIBERGLASS JACKET

2811	1	24	19/36	.083	\$ 176.39
2811/2	2	24	19/36	.126	260.48
2811/3	3	24	19/36	.134	397.25
2811/4	4	24	19/36	.146	507.66
2811/5	5	24	19/36	.159	679.53
2811/6	6	24	19/36	.172	806.19
2811/7	7	24	19/36	.172	883.85
2814	1	22	19/34	.089	184.73
2814/2	2	22	19/34	.138	287.55
2814/3	3	22	19/34	.146	445.21
2814/4	4	22	19/34	.160	564.27
2814/5	5	22	19/34	.175	803.11
2814/6	6	22	19/34	.190	946.16
2814/7	7	22	19/34	.190	1054.97
2817	1	20	19/32	.097	201.26
2817/2	2	20	19/32	.156	327.32
2817/3	3	20	19/32	.165	501.81
2817/4	4	20	19/32	.182	626.58
2817/5	5	20	19/32	.196	846.99
2817/6	6	20	19/32	.214	1014.02
2817/7	7	20	19/32	.214	1135.42
2819	1	19	19/30	.107	286.53

Alpha No.	No. of Conds.	Size	Strand	Nom. O.D. (in.)	Price per 100 ft. Spool
SHIELDED—TFE INSULATION—TFE IMPREGNATED FIBERGLASS JACKET (CONT'D)					
2819/2	2	19	19/30	.176	\$ 454.73
2819/3	3	19	19/30	.186	609.32
2819/4	4	19	19/30	.206	891.31
2819/5	5	19	19/30	.226	1153.11
2819/6	6	19	19/30	.252	1353.35
2819/7	7	19	19/30	.252	1533.54
2820	1	16	19/29	.117	313.58
2820/2	2	16	19/29	.198	583.58
2820/3	3	16	19/29	.203	799.74
2820/4	4	16	19/29	.223	1015.92
2820/5	5	16	19/29	.250	1232.09
2820/6	6	16	19/29	.274	1458.21
2820/7	7	16	19/29	.274	1643.96
2804	1	14	19/27	.131	410.69
2804/2	2	14	19/27	.225	710.38
2804/3	3	14	19/27	.244	962.25
2804/4	4	14	19/27	.269	1193.48
2804/5	5	14	19/27	.296	1331.26
2804/6	6	14	19/27	.324	1432.33
2803	1	12	19/25	.150	562.52
2803/2	2	12	19/25	.268	953.18
2803/3	3	12	19/25	.285	1349.68
2803/4	4	12	19/25	.314	1698.38

SHIELDED—TFE INSULATION—TFE TAPE JACKET

2821	1	24	19/36	.095	\$ 140.14
2821/2	2	24	19/36	.138	212.83
2821/3	3	24	19/36	.146	275.00
2821/4	4	24	19/36	.158	339.72
2821/5	5	24	19/36	.171	708.35
2821/6	6	24	19/36	.184	834.18
2821/7	7	24	19/36	.184	905.53
2824	1	22	19/34	.101	144.95
2824/2	2	22	19/34	.150	258.74
2824/3	3	22	19/34	.158	319.40
2824/4	4	22	19/34	.172	397.37
2824/5	5	22	19/34	.187	836.44
2824/6	6	22	19/34	.202	981.39
2824/7	7	22	19/34	.202	1096.08
2827	1	20	19/32	.109	184.98
2827/2	2	20	19/32	.168	302.84
2827/3	3	20	19/32	.177	382.92
2827/4	4	20	19/32	.194	456.53
2827/5	5	20	19/32	.208	896.64
2827/6	6	20	19/32	.226	1056.81
2827/7	7	20	19/32	.226	1219.21
2829	1	18	19/30	.119	196.43
2829/2	2	18	19/30	.188	356.58
2829/3	3	18	19/30	.198	450.21
2829/4	4	18	19/30	.218	575.28
2829/5	5	18	19/30	.238	1255.93
2829/6	6	18	19/30	.264	1469.67
2829/7	7	18	19/30	.264	1653.92
2826	1	16	19/29	.129	243.25
2826/2	2	16	19/29	.210	418.52
2826/3	3	16	19/29	.215	565.80
2826/4	4	16	19/29	.235	703.84
2826/5	5	16	19/29	.262	1054.69
2826/6	6	16	19/29	.286	1586.64
2826/7	7	16	19/29	.286	1782.16
2825	1	14	19/27	.143	407.92
2825/2	2	14	19/27	.237	720.62
2825/3	3	14	19/27	.256	1028.79
2825/4	4	14	19/27	.281	1276.71
2825/5	5	14	19/27	.308	1521.98
2825/6	6	14	19/27	.336	1813.33
2823	1	12	19/.0185"	.280	540.58
2823/2	2	12	19/.0185"	.297	1006.13
2823/3	3	12	19/.0185"	.326	1418.58
2823/4	4	12	19/.0185"	.330	1780.28

SHIELDED—TFE INSULATION—WHITE TFE JACKET

2831	1	24	19/36	.09	\$ 194.33
2831/2	2	24	19/36	.13	283.89
2831/3	3	24	19/36	.14	405.95
2834	1	22	19/34	.09	194.01
2834/2	2	22	19/34	.15	304.96
2834/3	3	22	19/34	.16	464.51
2837	1	20	19/32	.10	214.49
2837/2	2	20	19/32	.17	341.68
2837/3	3	20	19/32	.18	514.48

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MIL-Spec and UL Hook-Up Wire

SPECIFICATION MIL-W-16878D HOOK-UP WIRE

TYPE B PVC JACKET

Single conductor stranded tinned copper .010" polyvinylchloride insulation. **Voltage Rating:** 600V. **Operating Temperature:** -55°C to +105°C.

Mfr. No.	MIL-W Type	Conductor		Nom. O.D.	Colors†	Price per 1000 ft. Spool
		Size	Strand			
1850	B-32	32	7/40	.028"	1-6	\$ 82.80
1851	B-30	30	7/38	.032"	1-6	67.98
1852	B-28	28	7/36	.034"	1-10	55.38
1853	B-26	26	7/34	.038"	1-19	59.64
1854	B-24	24	7/32	.043"	1-19	56.09
1854/19	B-24	24	19/36	.043"	1-19	76.14
1855	B-22	22	7/30	.050"	1-19	60.35
1855/19	B-22	22	19/34	.050"	1-19	90.82
1856	B-20	20	7/28	.058"	1-19	73.13
1856/19	B-20	20	19/32	.058"	1-19	90.38
1857	B-18	18	7/26	.068"	1-19	93.72
1857/19	B-18	18	19/30	.068"	1-19	122.13
1858/19	B-16	16	19/29	.077"	1-19	122.83
1859/19	B-14	14	19/27	.091"	1-19	191.02

TYPE B NYLON JACKET

Same as above, but clear nylon jacket overall; 115°C.

Mfr. No.	MIL-W Type	Size	Strand	Nom. O.D.	Colors†	Price per 1000 ft. Spool
1864/19	B-24	24	19/36	.049"	1-3	\$115.64
1865	B-22	22	7/30	.056"	1-3	109.30
1865/19	B-22	22	19/34	.056"	1-3	132.16
1866	B-20	20	7/28	.064"	1-3	123.21
1866/19	B-20	20	19/32	.064"	1-3	142.75
1867	B-18	18	7/26	.074"	1-3	153.20
1867/19	B-18	18	19/30	.074"	1-3	182.12
1868/19	B-16	16	19/29	.085"	1-3	193.46
1869/19	B-14	14	19/27	.099"	1-3	284.14

TYPE C PVC JACKET

Single conductor stranded tinned copper; .016" polyvinylchloride insulation. **Voltage Rating:** 1000V. **Operating Temperature:** -55°C to +105°C.

Mfr. No.	MIL-W Type	Conductor		Nom. O.D.	Colors†	Price per 1000 ft. Spool
		Size	Strand			
1830	C-24	24	7/32	.058"	1-3	\$ 94.32
1831	C-22	22	7/30	.064"	1-3	105.96
1832	C-20	20	7/28	.072"	1-3	129.59
1833	C-18	18	7/26	.082"	1-3	187.40
1834	C-16	16	19/29	.091"	1	192.57
1835	C-14	14	19/27	.105"	1	382.53
1836	C-12	12	19/25	.124"	1	600.83

TYPE E TEFLON® STRANDED-CONDUCTOR WIRE

Stranded or solid, silver-plated copper conductor; extruded TFE Teflon insulation. **Voltage Rating:** 600V. **Operating Temperature:** -65°C to +200°C.

Mfr. No.	MIL-W Type	Conductor		Nom. O.D.	Colors†	Price per 100 ft. Spool*
		Size	Strand			
5851	E-30	30	7/38	.028"	1-19	\$ 30.70
5852	E-28	28	7/36	.031"	1-19	30.56
5853	E-26	26	7/34	.035"	1-19	32.21
5854	E-24	24	19/36	.040"	1-19	48.01
5854/7	E-24	24	7/32	.039"	1-19	37.47
5855	E-22	22	19/34	.046"	1-19	56.60
5855/7	E-22	22	7/30	.045"	1-19	44.86
5856	E-20	20	19/32	.054"	1-19	53.14
5856/7	E-20	20	7/28	.053"	1-19	46.82
5857	E-18	18	19/30	.064"	1-19	58.70
5858	E-16	16	19/29	.073"	1-19	72.09
5859	E-14	14	19/27	.094"	1-6, 11-19	137.88
5859/12§	E-12	12	19/25	.113"	1, 11-19	184.98
5859/10§	E-10	10	37/26	.134"	1, 11-19	269.43

§Insul. .017" thick. #Insul. .02" thick. *1000' spools avail.; prices on request.

KYNAR® INSULATED FOR WIRE WRAPPING

UL Style 1422 and 1423. Solid, silver-plated OFHC copper conductor with color-coded Kynar® insulation. **Operating Temperature:** -40°C to +125°C.

Mfr. No.	Cond. AWG	Stock Colors†	O.D. Ins.	UL No.	Price per 1000 ft. Spool
5951	30	1-10	.019	1423	\$150.92
5952	28	1-10	.024	1422	174.55
5953	26	1-10	.027	1422	178.48
5954	24	1-10	.030	1423	220.71

SPECIFICATION MIL-W-76B PLASTIC HOOK-UP WIRE

TYPE HW (HEAVY WALL)

Single conductor stranded tinned copper; heavy wall polyvinylchloride insulation. **Nominal Insulation:** .032" for 22-16 cond. sizes; .045" all other sizes. **Operating Temperature:** MIL -20°C to +80°C. **Voltage Rating:** 600V MIL-W-76B UL 1015 CSA TEW-105 ULCSA -20°C to +105°C.

Alpha No.	Type HW-C	Conductor		Nom. O.D.	Colors†	Price per 1000 ft. Spool
		Size	Strand			
1579	14 (41) U	14	41/30	.170"	1-3	\$ 353.48
1651	12 (65) U	13	65/30	.186"	1-3	532.71
1653	10 (105) U	10	105/30	.210"	1-3	820.93
1655	8 (133) U	8	133/29	.260"	1-3	1930.23
3071	.....	22	7/30	.095"	1-10	68.16
3073	.....	20	10/30	.102"	1-10	85.20
3075	.....	18	16/30	.112"	1-10	102.24
3077	.....	16	26/30	.125"	1-10	147.68

TYPE MW (MEDIUM WALL)

Single conductor stranded or solid tinned copper, polyvinylchloride insulation .016" th., **Voltage Rating:** 1000V. **Operating Temperature:** -40°C to +80°C. Passes UL VW-1 flame test.

STRANDED

Mfr. No.	MIL-W Type	Conductor		Nom. O.D.	Colors†	Price per 1000 ft. Spool
		Size	Strand			
1550	24 (7) U	24	7/32	.059"	1-19	\$ 54.67
1551	22 (7) U	22	7/30	.064"	1-27	63.90
1553	20 (10) U	20	10/30	.068"	1-27	75.26
1555	28 (16) U	18	16/30	.078"	1-27	92.30
1557	16 (26) U	16	26/30	.095"	1-19	134.90
1559	14 (41) U	14	41/30	.101"	1-15	211.58
1560	12 (65) U	12	65/30	.125"	1-15	303.88

SOLID

Mfr. No.	MIL-W Type	Size	Strand	Nom. O.D.	Colors†	Price per 1000 ft. Spool
1561/24	24 (1) U	24	1	.055"	1-10	\$44.02
1561	22 (1) U	22	1	.060"	1-10	51.12
1563	20 (1) U	20	1	.066"	1-10	61.77
1565	18 (1) U	18	1	.074"	1-10	93.71

UL HOOK-UP WIRE

300V, 80°C, UL STYLE 1007
CSA TR-64

Operating Temperature: -40°C to +80°C. **Voltage Rating:** 300V. Nom. wall thickness, .016". CSA Style TR-64, 1/64" nom. wall thickness. Passes UL VW-1 flame test

Mfr. No.	Conductor		Nom. O.D.	Colors†	Price per 1000 ft. Spool
	Size	Strand			
3047	30	7/38	.043"	1-19	\$ 51.48
3048	28	7/36	.047"	1-19	51.59
3049	26	7/34	.051"	1-10	52.91
3050	24	7/32	.057"	1-19	51.12
3051	22	7/30	.065"	1-19	59.97
3053	20	10/30	.071"	1-19	71.71
3055	18	16/30	.080"	1-19	80.94
3057	16	26/30	.095"	1-19	120.70

SEMI-RIGID PVC, 300V, 80°C UL STYLE 1061
CSA AWM SR-PVC

Stranded tinned copper, color coded semi-rigid polyvinylchloride insulation. **Operating Temperature:** -10°C to +80°C. **Voltage Rating:** 300V. Nom. wall thickness .009". Passes UL VW-1 flame test.

Mfr. No.	Size	Strand	Nom. O.D.	Colors†	Price per 1000 ft. Spool
3250	24	7/32	.042"	1-10	\$57.98
3251	22	7/30	.048"	1-10	62.38

†STOCK COLORS

Prices shown are for solid colors only. Following stripping charges apply for either one, two or three spiral tracers per item in any standard put-up. Plastic and nylon jacketed wire, \$2.25 per 1000 ft.; Teflon® wire, \$18.00 per 1000 ft. Other tracer colors available at extra cost. Write for information.

No.	Color	No.	Color	No.	Color
1	White	10	Violet	19	White/Violet
2	Black	11	White/Black	20	White/Black/Red
3	Red	12	White/Red	21	White/Black/Green
4	Green	13	White/Green	22	White/Black/Yellow
5	Yellow	14	White/Yellow	23	White/Black/Blue
6	Lt. Blue	15	White/Blue	24	White/Black/Brown
7	Brown	16	White/Brown	25	White/Black/Orange
8	Orange	17	White/Orange	26	White/Black/Gray
9	Gray	18	White/Gray	27	White/Black/Violet



MIL-Spec and UL Hook-Up Wire

SPECIFICATION MIL-W-16878D HOOK-UP WIRE

RX-7000 IRRADIATED-HEAT RESISTANT HOOK-UP WIRE

Newly developed hook-up wire with insulation made of irradiated polyvinylchloride compound (PVC). Withstands higher temperature, and even in direct contact with a soldering iron will not shrink back, melt, blow or deform. Ideal where high reliability is essential, particularly in the wiring of tight, high density systems, appliances, computer wiring, business machines. Instrumentation and control systems. **Temperature Rating:** +105°C. **Voltage Rating:** 600V, Type B; 1000V, Type C.

MIL-W-16878D TYPE B STRANDED, +105°C, 600V

Alpha No.	Conductor		Nom. O.D.	Colors †	Price per 1000 ft. Spool
	Size	Strand			
7053	26	7/34	.038"	1-19	\$ 72.35
7054	24	7/32	.043"	1-19	76.45
7054/19	24	19/36	.043"	1-19	82.94
7055	22	7/30	.050"	1-19	86.59
7055/19	22	19/34	.050"	1-19	97.11
7056	20	7/28	.058"	1-19	107.62
7056/19	20	19/32	.058"	1-19	106.88
7057	18	7/26	.068"	1-19	135.33
7057/19	18	19/30	.068"	1-19	174.19
7058/19	16	19/.0117	.077"	1-19	225.87

TYPE ET EXTRUDED TEFLON® WIRE

105°C 1000V MIL-W-16878D TYPE C 300V, UL STYLE 1430 CSA REW XLPVC

Alpha No.	Conductor		Insul. Thickness		Diameter		Stock Colors
	AWG	Strand	Inches	mm	Inches	mm	
7130	24	7/32	0.016	0.41	0.056	1.42	1-10
7131	22	7/30	0.016	0.41	0.062	1.58	1-10
7132	20	7/28	0.016	0.41	0.070	1.78	1-10
7133	18	7/26	0.016	0.41	0.082	2.08	1-10
7134	16	19/29	0.016	0.41	0.092	2.34	1-10
7035†	14	19/27	0.016	0.41	0.107	2.72	1-10
7036†	12	19/25	0.016	0.41	0.124	3.15	1-10

Standard Put-Up: 100 ft. (30.5m), 1000 ft. (305m), †UL 33/7

Single conductor stranded, silver-plated copper; extruded TFE Teflon® insulation, .006" thick. **Temperature Rating:** -65°C to +200°C. **Voltage Rating:** 250V.

Alpha No.	MIL-W Type	Conductor		Nom. O.D.	Colors †	Price per 1000 ft. Spool
		Size	Strand			
2840/7	ET-32	32	7/40	.021"	1-10	\$138.18
2841/7	ET-30	30	7/38	.024"	1-10	148.11
2842/7	ET-28	28	7/36	.027"	1-10	162.26
2842/19	ET-28	28	19/40	.027"	1-10	322.65
2843/7	ET-26	26	7/34	.031"	1-10	164.66
2843/19	ET-26	26	19/38	.032"	1-10	277.31
2844/7	ET-24	24	7/32	.036"	1-10	198.53
2844/19	ET-24	24	19/36	.037"	1-10	245.05
2845/7	ET-22	22	7/30	.042"	1-10	210.73
2845/19	ET-22	22	19/34	.044"	1-10	276.96
2841/1	.....	30†	Solid	.022"	1-10	165.57
2842/1	.....	28†	Solid	.025"	1-10	161.03
2843/1	.....	26†	Solid	.028"	1-10	170.10
2844/1	.....	24†	Solid	.032"	1-10	186.77

†Solid silver plated copper conductor.

TYPE B, PRE-BONDED, UNCOVERED PLASTIC

Each strand is double tinned and then heated to bond the strands together for easy stripping. MIL-W-16878, polyvinylchloride. **Operating Temperature:** -55°C to +105°C. **Voltage Rating:** 600V.

3154	B-24	24	7/32	.044"	1-10	\$103.08
3155	B-22	22	7/30	.051"	1-10	122.16

MIL-W-16878D TYPE B IRRADIATED POLYOLEFIN HOOK-UP WIRE

UL STYLES 3265, 3266, 3271, 3272

Alpha No.	Conductor		Nom. O.D.	Price per 1000 ft. Spool
	Size	Strand		
UL STYLE 3265, 125°C, 150V, CSA, XLPE, 125 C, 150V MIL-W-16878D, TYPE B, 105°C, 600V				
7011	24	19/36	.047"	\$ 166.82
7012	22	19/34	.054"	228.12
7013	20	19/32	.062"	213.60
7014	18	19/30	.072"	277.79
7015	16	19/.0117"	.079"	343.94

UL STYLE 3266, 125°C, 300V, CSA CL-1252, 125°C, 300V MIL-W-16878D TYPE C, 105°C 1000V

7023	24	19/36	.057"	\$ 176.80
7024	22	19/34	.064"	199.21
7025	20	19/32	.072"	241.00
7026	18	19/30	.082"	307.15
7027	16	19/.0117"	.089"	377.39

UL STYLES 3271 & 3272, 125°C, 600V, CSA CL-1251, 125°C, 600V, MIL-W-16878D TYPE D, 105°C, 3000V

7044*	18	16/30	.108"	\$ 356.95
7045*	16	26/30	.122"	446.11
7046*	14	41/30	.139"	594.01
7047*	12	65/30	.153"	890.11
7048*	10	105/30	.192"	1353.93

*Available in black, white, and red only; all others available in black, white, red, green and blue.

TEFZEL® COMPUTER WIRE 150°C, 300V

Rugged flexible wire-wrap wire. Solid silver-plated OFHC copper conductor. Tefzel insulation (copolymer of ethylene and tetrafluoroethylene). Low dielectric constant of 2.6. Rated non-burning or self-extinguishing. **Operating Temperature:** -70°C to +150°C, continuous. Nom. wall thickness, .005". Cut lengths available, write or phone for information.

Alpha No.	Size	Conductor		Colors †	Price per 1000 ft. Spool
		Strand	Nom. O.D.		
1805	30	.....	.019"	1-10	\$368.31
1806	28	.....	.023"	1-10	396.92
1807	26	.....	.026"	1-10	426.89
1808	24	.....	.029"	1-10	481.24

†COLOR CODE

No.	Color	No.	Color	No.	Color	No.	Color
1	White	6	Lt. Blue	11	Wht/Blk	16	Wht/Brn
2	Black	7	Brown	12	Wht/Red	17	Wht/Orng
3	Red	8	Orange	13	Wht/Grn	18	Wht/Gray
4	Green	9	Gray	14	Wht/Yel	19	Wht/
5	Yellow	10	Violet	15	Wht/Blue		Violet

WE CAN SUPPLY ALL YOUR REQUIREMENTS FOR INDUSTRIAL ELECTRONIC EQUIPMENT AND PARTS. WE OFFER A COMPLETE LINE WITH UP-TO-DATE STOCK, FAST DELIVERY AND PRODUCTION QUANTITY PRICING. CALL FOR INFORMATION ON NEW OR UNLISTED ITEMS.



Cord Sets

3-CONDUCTOR ELECTRONIC POWER SUPPLY CORDS

NEMA 5-15p. Grounding type plug with CEE color-coded cord. Free end has jacket stripped 2", insulation stripped 5/8", and conductors twisted. Jacket is black.

Alpha No.	Length	AWG	Strand	Nom. O.D.	Power Rating (Amps)	Cord Type	Price Each
SHIELDED							
507F	6' 7"	18	41/34	.270"	10	SVT	\$ 5.11
508F	9' 10"	18	41/34	.270"	10	SVT	6.46
502F	9' 10"	18	41/34	.337"	10	SJT	7.53
504F	9' 10"	16	65/34	.36"	13	SJT	8.72
505F	6' 7"	14	41/30	.406"	15	SJT	7.67
506F	9' 10"	14	41/30	.406"	15	SJT	10.38

UNSHIELDED							
501	6' 7"	18	41/34	.328"	10	SJT	\$ 3.15
502	9' 10"	18	41/34	.328"	10	SJT	3.91
503	6' 7"	16	65/34	.353"	13	SJT	3.76
504	9' 10"	16	65/34	.353"	13	SJT	4.96
505	6' 7"	14	41/30	.385"	15	SJT	4.81
506	9' 10"	14	41/30	.385"	15	SJT	6.32

3-CONDUCTOR ELECTRONIC LINE CORD

NEMA 5-15p. Connector rated for 15 Amp, 125 Volt service; UL listed, CSA certified. Cord is CEE color-coded. Jacket is black. Jacket stripped 2". Insulated 5/8"

Alpha No.	Length	AWG	Strand	Nom. O.D.	Power Rating (Amps)	Cord Type	Price Each
UNSHIELDED—STRAIGHT CONNECTOR							
523	7' 6"	18	41/34	.253"	10	SVT	\$ 3.61
511	6' 7"	18	41/34	.328"	10	SJT	3.76
512	9' 10"	18	41/34	.328"	10	SJT	4.66
513	6' 7"	16	65/34	.353"	13	SJT	4.36
514	9' 10"	16	65/34	.353"	13	SJT	5.41

SHIELDED—RIGHT ANGLE CONNECTOR							
521F	6' 7"	14	41/30	.40"	15	SJT	\$10.82

3-CONDUCTOR DETACHABLE POWER SUPPLY SETS

NEMA 5-15p. Plug and C-13 connector rated for 15 Amp, 125 Volt service; UL Listed and CSA certified. Cord is CEE color-coded. Jacket is black.

Alpha No.	Length	AWG	Strand	Nom. O.D.	Power Rating (Amps)	Cord Type	Price Each
SHIELDED—RIGHT ANGLE CONNECTOR							
549F	6' 7"	18	41/34	.270"	10	SVT	\$ 7.37
550F	9' 10"	18	41/34	.270"	10	SVT	8.72
537F	6' 7"	18	41/34	.337"	10	SJT	8.12
540F	9' 10"	16	65/34	.367"	13	SJT	10.83

UNSHIELDED—RIGHT ANGLE CONNECTOR							
537	6' 7"	18	41/34	.328"	10	SJT	\$ 4.66
538	9' 10"	18	41/34	.328"	10	SJT	5.57
539	6' 7"	16	65/34	.353"	13	SJT	5.41
540	9' 10"	16	65/34	.353"	13	SJT	6.46

3-CONDUCTOR EXTENSION CORDS

Heavy-duty, 3-conductor extension cords for applications in business machines and other polarized electrical; devices requiring a ground lead. Jacket is black.

Alpha No.	Length	AWG	Strand	Nom. O.D.	Power Rating (Amps)	Cord Type	Price Each
633	10' 0"	16	26/30	.353"	13	SJ	\$ 8.28
640	15' 0"	16	26/30	.353"	13	SJ	23.49

3-CONDUCTOR DETACHABLE POWER SUPPLY CORDS

Conductor color code: 543, CEE; 544, North American Standard. Type 543 meets the new polarity configuration mandated by UL 817 and CSA bulletin 895B. Type 544 has a non-standard polarity configuration and is intended for replacement purposes only.

Alpha No.	Length	AWG	Strand	Nom. O.D.	Power Rating (Amps)	Cord Type	Price Each
543*	7' 6"	18	41/34	.253"	7	SVT	\$4.66
544	8' 0"	18	41/34	.253"	7	SVT	4.81
545§	7' 6"	18	41/34	.253"	10	SVT	4.20
546§	7' 6"	18	65/34	.353"	13	SJT	5.41

*Specify gray or black jacket. §Available with black jacket only.

3-CONDUCTOR DETACHABLE POWER SUPPLY CORDS

NEMA 5-15p Plug and C-13 connector rated for 15 Amps, 125 Volt service; UL Listed and CSA certified. Cord is CEE color-coded. Jacket is black.

Alpha No.	Length	AWG	Strand	Nom. O.D.	Power Rating (Amps)	Cord Type	Price Each
SHIELDED STRAIGHT CONNECTOR							
547F	6' 7"	18	41/34	.270"	10	SVT	\$ 7.07
548F	9' 10"	18	41/34	.270"	10	SVT	8.58
531F	6' 7"	18	41/34	.337"	10	SJT	7.82
533F	6' 7"	16	65/34	.367"	13	SJT	8.58
534F	9' 10"	16	65/34	.367"	13	SJT	10.68
535F	6' 7"	14	41/30	.406"	15	SJT	9.47
536F	9' 10"	14	41/30	.406"	15	SJT	12.34

UNSHIELDED STRAIGHT CONNECTOR							
531	6' 7"	18	41/34	.328"	10	SJT	\$ 4.52
535	7' 7"	18	41/34	.253"	10	SVT	4.20
532	9' 10"	18	41/34	.328"	10	SJT	5.27
533	6' 7"	16	65/34	.353"	13	SJT	5.11
534	9' 10"	16	65/34	.353"	13	SJT	6.32

2-CONDUCTOR RUBBER CORDS

Heavy-duty cordsets made for hard service application, including heavy-duty appliances and fractional horsepower motors not requiring an integral grounding lead. The molded vinyl, two-wire plug is rated for 15 Amp, 125 Volt service; UL Listed and CSA certified. CEE Color Code. Jacket is black.

Alpha No.	Length	AWG	Strand	Nom. O.D.	Power Rating (Amps)	Cord Type	Price Each
606	8' 0"	18	16/30	.298"	10	SJ	\$4.20

3-CONDUCTOR POWER SUPPLY CORDS

Hard service cord for use with bench tools, such as grinders, shapers and sanders, or non-double insulated power tools such as drills, saws and routers. All non-double insulated tools require 3-conductor cords for UL approval. Molded vinyl plug is rated for 15 Amp, 125 Volt service; UL Listed and CSA certified. Color code is North American Standard.

Alpha No.	Length	AWG	Strand	Nom. O.D.	Power Rating (Amps)	Cord Type	Price Each
615	6' 0"	18	16/30	.328"	10	SJ†	\$ 4.81
780	6' 0"	18	16/30	.328"	10	SJT†	3.31
778	8' 0"	18	16/30	.328"	10	SJ†	5.27
779	8' 0"	18	16/30	.328"	10	SJT†	3.76
781	8' 0"	18	16/30	.328"	10	SJO§	5.41
782	12' 0"	18	16/30	.328"	10	SJ†	6.62
783	9' 0"	16	26/30	.353"	13	SJ†	6.46
784	12' 0"	16	26/30	.353"	13	SJ†	8.12
785	15' 0"	16	26/30	.353"	13	SJ†	12.34
775	6' 0"	18	41/34	.265"	10	SV†	4.36
776	8' 0"	18	41/34	.265"	10	SV†	4.96
777	6' 0"	18	41/34	.253"	10	SVT§	3.01
787	8' 0"	18	41/34	.253"	10	SVT§	3.31
788	9' 0"	14	41/30	.380"	15	SJ†	9.78
789	15' 0"	14	41/30	.380"	15	SJ†	17.00

Jacket Color and Material: *Gray vinyl; †Black rubber; §Black neoprene.

**WE CARRY MOST
MAJOR BRANDS. IF YOU CAN'T FIND WHAT YOU WANT,
CALL US FOR INFORMATION.**



3 CONDUCTOR MEDICAL GRADE CORDSETS

CORDSETS ARE DESIGNED TO REDUCE THE HAZARDS OF SHOCK DUE TO CURRENT LEAKAGE BETWEEN THE TWO CONDUCTORS.

2

FEATURES:

- Clear plug body facilitates visual check of soldered connections.
- Nickel plug resists corrosion.
- x "U" shaped ground pin for improved strength and rigidity.
- Sure, reliable plug body grip.
- Plug body construction resists crushing, most chemicals, moisture and heat.

PRODUCT CONSTRUCTION:

- **LENGTH:** 10 ft.
- **INSULATION:** Color coded PVC
Color code: black, white, green
PVC: gray, white, black
- **JACKET:** Molded PVC hospital grade
- **PLUG:** Clear, gray, white, black
- **TERMINATION END:** Molded PVC grounded connector
Cable jacket stripped

Suitable for use on x-ray equipment, diagnostic equipment, operating equipment, IV'S, blood analyzers and various Bio Medical equipment, such as inter-arterial balloon pumps, bedside monitors and lab computers.

UNSHIELDED, NEMA 5-15P, STRIPPED END

Alpha Part No.	Length	Conductor		Diameter		Power Rating		UL Type	Jacket Color	Plug Color	Price Each
	Ft.-In.	AWG	Strand	In.	mm	Watts	Amps				
801	10-0	18	43/34	0.31	7.8	1250	10	SJT	Black	Clear	\$8.97
802	10-0	18	43/34	0.31	7.8	1250	10	SJT	Gray	Gray	8.97
803	10-0	18	43/34	0.31	7.8	1250	10	SJT	Gray	Clear	8.97
804	10-0	18	43/34	0.31	7.8	1250	10	SJT	White	White	8.97
810	10-0	16	68/34	0.33	8.5	1625	13	SJT	Black	Clear	9.09
811	10-0	16	68/34	0.33	8.5	1625	13	SJT	Gray	Gray	9.09
812	10-0	16	68/34	0.33	8.5	1625	13	SJT	Gray	Clear	9.09
813	10-0	16	68/34	0.33	8.5	1625	13	SJT	White	White	9.09

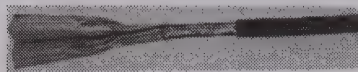
UNSHIELDED, NEMA 5-15P, C13 CONNECTOR

Alpha Part No.	Length	Conductor		Diameter		Power Rating		UL Type	Jacket Color	Plug Color	Connector Color	Price Each
	Ft.-In.	AWG	Strand	In.	mm	Watts	Amps					
820	10-0	18	43/34	0.31	7.8	1250	10	SJT	Black	Black	Black	\$ 9.54
821	10-0	18	43/34	0.31	7.8	1250	10	SJT	Gray	Gray	Gray	9.54
822	10-0	18	43/34	0.31	7.8	1250	10	SJT	Gray	Clear	Clear	9.54
823	10-0	18	43/34	0.31	7.8	1250	10	SJT	White	White	White	9.54
830	10-0	16	68/34	0.33	8.5	1625	13	SJT	Black	Black	Black	10.68
831	10-0	16	68/34	0.33	8.5	1625	13	SJT	Gray	Gray	Gray	10.68
832	10-0	16	68/34	0.33	8.5	1625	13	SJT	Gray	Clear	Clear	10.68
833	10-0	16	68/34	0.33	8.5	1625	13	SJT	White	White	White	10.68

Alpha Hospital Grade Cordsets feature Black, Gray and White jacket colors as standard, non-special products. Standard cord Length: 10 Ft.

**CONSULT OUR STAFF OF
ELECTRONICS EXPERTS ON ALL YOUR SPECIAL
EQUIPMENT OR COMPONENT NEEDS.**

ROUND-TO-FLAT CABLE, SHIELDED



UL 2651

105°C

300 VOLTS

- Flat cable on .50 centers
- Flat cable terminations are 3/4" in length and occur every 1 1/2"
- 28 AWG stranded
- 70 Ohm impedance
- NEC-CL2 rated

Mfr. No.	No. Cond.	Nom. Width (in.)	Wt. per 100 (Lbs.)	Price per 100 ft.
3585/25	25	.34	7.7	\$126.21
3585/26	26	.35	10.1	131.26
3585/40	40	.40	12.1	183.44
3585/50	50	.46	14.1	213.58

GRAY FLAT CABLE 0.025" CENTERS



UL 2651

105°C

300 VOLTS

- 28 AWG standard conductors
- .010" PVC insulated
- .050" conductor spacing
- General purpose use

Mfr. No.	No. Cond.	Nom. Width (in.)	Wt. per 100 (Lbs.)	Price per 100 ft.
3580/9	9	0.45	0.45	\$ 28.60
3580/10	10	0.50	1.2	31.95
3580/14	14	0.70	1.7	44.69
3580/15	15	0.75	1.9	47.70
3580/16	16	0.80	2.0	51.02
3580/20	20	1.00	2.4	63.47
3580/24	24	1.25	2.9	76.59
3580/25	25	1.25	3.1	80.36
3580/26	26	1.30	3.2	83.00
3580/34	34	1.70	4.2	108.49
3580/37	37	1.85	4.6	118.97
3580/40	40	2.00	4.9	127.59
3580/50	50	2.50	6.1	159.47
3580/60	60	3.00	7.3	194.54
3580/64	64	3.20	7.7	207.80

GRAY FLAT CABLE 0.025" CENTER



UL 2678

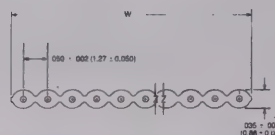
105°C

150 VOLTS

- 30 AWG solid copper conductors
- Gray PVC insulation with red stripe on leading edge.
- 75 Ohm impedance

Mfr. No.	No. Cond.	Nom. Width (in.)	Wt. per 100 (Lbs.)	Price per 100 ft.
3582/26	26	.65	1.7	\$ 52.21
3582/40	40	1.00	2.7	80.33
3582/50	50	1.25	3.3	100.42
3582/60	60	1.50	4.0	120.49

COLOR-CODED FLAT CABLE 0.050" CENTERS



UL20029

105°C

300 VOLTS

- 28 AWG stranded conductors
- .010" PVC insulation
- .050" conductor spacing
- Color Code: Brown, red, orange, yellow, green, blue, violet, white, black and repeat

Mfr. No.	No. Cond.	Nom. Width (in.)	Wt. per 100 (Lbs.)	Price per 100 ft.
3583/9	9	0.45	0.9	\$ 38.20
3583/10	10	0.50	1.1	42.46
3583/14	14	0.70	1.5	59.44
3583/15	15	0.75	1.6	64.00
3583/16	16	0.80	1.7	67.90
3583/20	20	1.00	2.2	84.89
3583/24	24	1.20	2.6	101.89
3583/25	25	1.25	2.8	106.10
3583/26	26	1.30	2.9	110.35
3583/34	34	1.70	3.7	144.30
3583/37	37	1.85	4.1	157.08
3583/40	40	2.00	4.4	169.79
3583/50	50	2.50	5.5	212.22
3583/60	60	3.00	6.6	254.66
3583/64	64	3.20	7.0	271.63

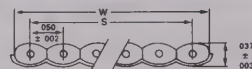
COLOR-CODED TWIST TO FLAT CABLE 0.050" CENTERS



UL20184

105°C

300 VOLTS

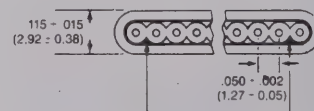


- 28 AWG stranded tinned copper conductor
- PVC insulation
- Twisted lengths 18 inches
- 100 Ohm impedance range
- 10 standard color repeat with tan as the common color in each pair
- Flat length 2 inches
- Color Code: Brown, red, orange, yellow, green, blue, violet, gray, white, black, tan (common)

Mfr. No.	No. Cond.	Nom. Width (in.)	Wt. per 100 (Lbs.)	Price per 100 ft.
3586/26	26(13)	1.30	3.8	\$118.58
3586/40	40(20)	2.00	5.9	182.58
3586/50	50(25)	2.50	7.3	228.05
3586/60	60(30)	3.00	8.8	273.66

JACKETED FLAT CABLE, SHIELDED

105°C



150 VOLTS

Same as 3589 Series, except has aluminum/Mylar[®]/aluminum shield between cable core and jacket. Shield aids in system compliance with FCC Docket 20780.

Mfr. No.	No. Cond.	Nom. Width (in.)	Wt. per 100 (Lbs.)	Price per 100 ft.
3590/9	9	0.52	3.9	\$210.07
3590/10	10	0.57	4.6	233.41
3590/14	14	0.77	6.0	269.57
3590/15	15	0.82	6.4	278.46
3590/16	16	0.87	6.7	287.34
3590/20	20	1.07	8.1	325.51
3590/24	24	1.27	9.6	365.28
3590/25	25	1.32	9.7	374.98
3590/26	26	1.37	9.8	384.58
3590/34	34	1.77	16.3	495.81
3590/37	37	1.95	17.7	528.42
3590/40	40	2.07	19.1	561.11
3590/50	50	2.57	23.5	673.18
3590/60	60	3.07	28.2	807.82

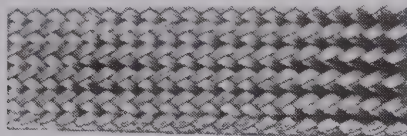
[®]Mylar is a registered trademark of E.I. DuPont.

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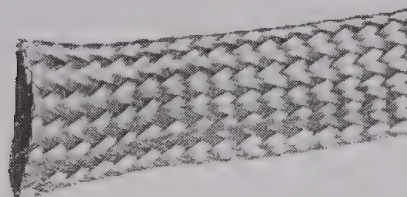
Tinned Copper Braid

SHIELDING GROUND STRAP A tight weave of multi-strand, soft drawn tinned copper wire: tinned copper braid is an ideal shielding material for short run cables providing easy radial termination. In retrofit applications, provides an additional shielding efficiency. Tinned copper flat braid, used as a ground strap, provides an excellent low impedance ground path.



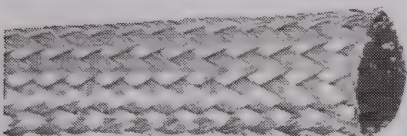
Description

- Woven tinned copper braid rolled flat to specific width
- Each strand meets requirements of Fed. Spec. QQ-W-343E and ASTM-B-33
- Meets QQB-575B



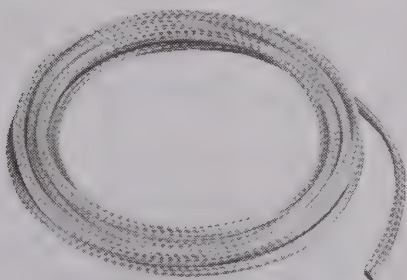
Description

- Woven tinned copper braid manufactured in tubular configuration
- Each strand meets requirements of Fed. Spec. QQ-W-343E and ASTM-B-33



Description

- Each strand soft drawn tinned copper wire meets Fed. Spec. QQ-W-343E and ASTM-B-33
- Shield coverage: 95% when placed over mandrel of equivalent diameter to that of braid interior.



Description

- Each strand soft drawn silver plated copper wire
- Shield coverage: 95% when placed over mandrel of equivalent diameter to that of braid interior

TINNED COPPER FLAT BRAID QQ-W-343E AND QQ-B-575B

Alpha No.	Size (In.)		Approx. AWG Equiv.	Approx. Current Cap. (Amps)	Price per 100 Ft.
	Nom. Flat Width	Nom. Thk.			
1221	.025	0.015	27	4	\$ 38.47
1222	1/32	0.020	24	6	41.39
1223	3/64	0.020	22	7	43.88
1224	1/16	0.020	19	11	48.71
1229	1/8	0.020	18	16	54.85
1230	3/16	0.020	15	25	59.67
1231	1/4	0.030	14	32	81.03
1232	5/16	0.030	12	46	129.73
1233/2	1/2	0.030	10	53	164.39
1233	5/8	0.030	10	53	173.91
1234	3/4	0.040	7	85	391.39
1235	1	0.045	7	85	418.89
1239	1 1/4	0.050	5	100	474.90
1240	1 1/2	0.060	3	150	665.48
1241	1 3/4	0.080	2/0	280	1330.97
1242	2	0.120	3/0	310	1670.29
1242/4	3	0.200	4/0	390	3222.41

TINNED COPPER OVAL BRAID QQ-W-343E

Alpha No.	Nom. Rounded I.D. (In.)	Approx. AWG Equiv.	Approx. Current Cap. (Amps)	Price per 100 Ft.
2132	1/16	19	11	\$ 38.47
2138	1 1/64	14	32	97.11
2140	3/16	13	38	104.28
2142	1/4	12	41	126.22
2144	5/16	11	46	140.71
2146	1/2	9	62	266.93
2148	5/8	8	64	290.48
2150	1 1/16	7	81	358.34
2152	2 5/32	7	85	391.54

TINNED COPPER TUBULAR BRAID QQ-W-343E, QQ-B-575

Alpha No.	Nom. Rounded I.D. (In.)	Approx. AWG Equiv.	Approx. Current Cap. (Amps)	Price per 100 Ft.
2160	1/32	22	7	\$ 29.55
2162	1/16	19	11	62.17
2163	5/64	18	16	72.11
2164	7/64	16	19	95.21
2166	1/8	15	25	99.31
2167	9/32	12	40	164.39
2168	1 1/64	14	32	126.52
2170	1 3/64	11	46	176.09
2171	1/4	10	53	238.11
2171/1	9/32	9	60	248.34
2172	5/16	10	53	245.42
2173	3/8	6	90	404.84
2174	1/2	9	62	336.40
2175	5/8	3	145	621.02
2175/1	2 1/32	1	190	952.01
2176	2 5/32	7	88	455.31

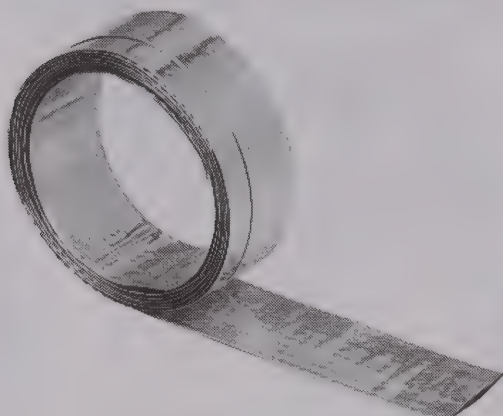
EXTRA LARGE TINNED COPPER TUBULAR BRAID, QQ-B-575

Alpha No.	Nom. Rounded I.D. (In.)	Approx. AWG Equiv.	Approx. Current Cap. (Amps)	Price per 100 Ft.
2177	7/8	5	100	\$ 713.75
2178	1	4	120	805.59
2179	1 1/8	4	130	843.92
2180	1 1/4	3	145	947.32
2181	1 3/8	3	150	1100.02
2182	1 1/2	2	165	1182.66

SILVER-PLATED TUBULAR BRAID, QQ-B-575

Alpha No.	Nom. Rounded I.D. (In.)	Approx. AWG Equiv.	Approx. Current Cap. (Amps)	Price per 100 Ft.
2191	1/16	19	11	\$149.92
2193	7/64	16	19	268.54
2194	1/8	15	25	287.99
2195	5/32	12	40	545.69
2196	1 1/64	14	32	407.92
2197	1 3/64	11	46	766.70
2198	1/4	10	53	967.52

FIT[®]-SHIELD HEAT SHRINKABLE ALUMINUM



FIT[®]-SHIELD is a highly flexible, heat shrinkable aluminum tube used to repair or replace foil wrap, metal braid or copper braid shield material. Shrinking up to 60% of its original diameter, FIT[®]-SHIELD provides excellent electromagnetic shielding and provides minimum frequency leakage. FIT[®]-SHIELD is a laminate on PVC film, and its base aluminum on the inside of the tube is suitable for forming electrical contact with substrates. Applications include EMI and RFI shielding, and cable repair and splicing. **Operating Temperature:** -20°C to +90°C. **Shrinkage Ratio:** Approximately 2 to 1 at 90°C. **Flammability:** Self-extinguishing (UL VW-1.) **Tensile Strength:** 49 MPA. **Ultimate Elongation:** 100%. **Dielectric Strength:** 2000 V.

Mfr. No.	Pre-Shrinkage Size (In.)	Post-Shrinkage Size (In.)	Thk. (In.)	Standard Roll (Ft.)	Price Each
FIT-SHIELD 1/4	.394	.158	.003	20	\$ 62.48
FIT-SHIELD 1/2	.787	.314	.003	20	127.80
FIT-SHIELD 3/4	1.180	.472	.003	10	96.56
FIT-SHIELD 1 1/4	1.970	.790	.003	10	134.90
FIT-SHIELD 1 3/4	2.750	1.020	.003	10	213.00
FIT-SHIELD 2 1/2	3.940	1.570	.003	10	284.00

EMI ABSORBERS

Easy-to-use, cost-effective product shields data or power cables from low frequency interference. Ferrite absorbers allow desired signals to pass through cables and keep out unwanted signals. Does not require grounding. No loss in dc when interference dissipates. **Applications:** Data communications equipment; computers, printers, electronic typewriters and word processors; radio and television receivers; medical electronic systems; digital, audio and video equipment; PBX's and CATV's and cordless and automobile phones.

Features/Benefits:

- Reduces EMI on cables for compliance with FCC PART 15, VDE and CISPR 22 limits
- Will not affect data transmitted
- No grounding required unlike cable shields
- Absorbs EMI signal and noise
- Prevents unreadable or false output over data cables
- Solves EMI problems, no need for cable shielding
- Installs simply: slide onto or clamp around input/output cables, or power cables on many types of computing devices

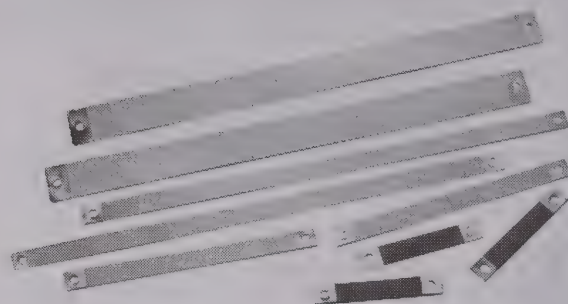
Mfr. No.	H (In.)	W (In.)	D (In.)	Radius (In.)	Impedance ± 25MHz	Ohms ± 100MHz	Price per Put-Up (10 pieces)
EAB-1/4	.616	.616	1.125	.275	158	256	\$ 82.36
EAB-1/2	1.122	1.122	1.125	.542	144	233	130.64

BUS BAR TINNED COPPER

Solid wire for winding of coils, antennas, point-to-point wiring, bus bar, component leads, ground wire. Pure electrolytic soft, drawn, solid copper annealed and tinned for quick soldering, QQ-W-343 Type S and ASTM-B-33 specifications.

Mfr. No.	Cond. Size	Circ. MIL Area	Nom. O.D.	Price per 100 ft. Spool
299/3	30 AWG	100	.010"	\$ 6.33
299/2	28 AWG	159	.013"	6.33
299/1	26 AWG	253	.016"	6.65
299	24 AWG	404	.020"	6.79
298	22 AWG	640	.025"	7.10
297	20 AWG	1020	.033"	8.49
296	18 AWG	1620	.040"	11.10
295	16 AWG	2580	.051"	15.73
286	14 AWG	4110	.065"	24.07
289	12 AWG	6530	.082"	35.66
292	10 AWG	10380	.103"	78.40
292/8	8 AWG	16510	.129"	124.69
292/6	6 AWG	26240	.162"	206.78

INSULATED COPPER GROUND STRIP



CGS grounding straps have a low impedance ground path, which reduces EMI at RF frequencies. Straps are flexible, double-insulated laminates of copper (inside) and Mylar[®] (outside.) They are pre-punched and tinned at the ends to facilitate termination. Straps' standard construction is 5 oz. rolled, annealed copper, laminated on both sides to 2 Mil Mylar, and they include a flame retardant polyester adhesive. For ease of installation with #10 screws, ends are pre-punched with 0.187 inch diameter holes. Oxidation of the termination contact area is prevented thanks to a 0.5 inch tinned area at each end.

Features/Benefits:

- Low RF Impedance
- High flexibility
- Installs simply
- High dielectric strength
- Many standard sizes

Mfr. No.	Lgth (In.)	Width (In.)	Center to Center (In.)	Approx. Current Carrying Capacity (Amps)	Price per Put-Up (25 pieces)
CGS-50-3	3	0.5	2.5	30	\$ 51.76
CGS-50-6	6	0.5	5.5	30	68.64
CGS-50-12	12	0.5	11.5	30	94.15
CGS-100-3	3	1.0	2.5	50	64.97
CGS-100-6	6	1.0	5.5	50	94.15
CGS-100-12	12	1.0	11.5	50	140.07

®Mylar is a registered trademark of E.I. Du Pont.

EMI/RFI COPPER SHIELDING TAPE

Alpha CST gives added protection against EMI/RFI. A copper foil tape backed with a highly conductive pressure-sensitive adhesive that gives added protection against EMI/RFI. Alpha CST can be used in a variety of commercial EMI/RFI shielding applications. Shielding performance is approximately 5 dB better than other metal foil shielding tapes because the adhesive contains a uniform dispersion of unique oxidation-resistant conductive particles that produce very low resistance through the tape.

Applications: Ground shields or planes for electronic cable; electrical contact to surfaces that cannot be soldered; low impedance connection between metal connector back shell and the braided cable in molded cables; electrical continuity in seams of EMI/RFI shielded rooms; draining of static charges on CRT's and computer peripherals; bus bar application, and R&D prototyping, design and troubleshooting.

Features/Benefits:

- Aids to ensure point-to-point electrical continuity
- Helps meet FCC requirements
- UL Recognized

Mfr. No.	Width (In.)	Standard Package	Price Each
CST-5	0.5	1 Roll (36 yards)	\$ 40.87
CST-10	1.0	1 Roll (36 yards)	85.33
CST-15	1.5	1 Roll (36 yards)	125.87
CST-20	2.0	1 Roll (36 yards)	166.11

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.



FIT-221 (2:1) IRRADIATED POLYOLEFIN TUBING

FIT-221 is the most widely used general purpose heat shrinkable tubing. FIT-221 is an irradiated flexible flame retardant polyolefin tubing with a wide scope of applications. These include harnessing, wire bundling, strain relief or any application where components or cables must be insulated or packaged. **Ultimate Elongation:** 400% nominal. **Longitudinal Shrinkage:** 3% nominal. **Environmental Resistance:** Will not support fungus growth. Non-corrosive. Max. water absorption: 0.5%. **Colors:** Specify clear, black, white, red, yellow, blue, or green. UL Recognized, CSA Certified—except clear.*

Mfr. No. FIT*	Size (In.)			4 Ft. Lengths		6 In. Lengths	
	Min. I.D.*	Recov. I.D.†	Wall Thk.	Std. Pkg.	Price Each	Std. Pkg.	
221-3/64"	.046	.023	.016	100'	\$22.34	20'	\$8.24
221-1/16"	.063	.031	.017	100'	22.81	18'	8.24
221-3/32"	.093	.046	.020	100'	25.87	16'	8.24
221-1/8"	.125	.062	.020	100'	27.36	14'	8.24
221-3/16"	.187	.093	.020	100'	33.23	12'	8.24
221-1/4"	.250	.125	.025	100'	42.06	10'	8.24
221-3/8"	.375	.187	.025	100'	46.85	8'	8.24
221-1/2"	.500	.250	.025	20'	10.54	7'	8.24
221-3/4"	.750	.375	.030	20'	14.16	6'	8.24
221-1"	1.000	.500	.035	20'	19.78	4'	8.24
221-1 1/2"	1.500	.750	.040	20'	36.86	2.5'	8.24
221-2"	2.000	1.000	.045	20'	50.92	1.5'	8.24
221-3"	3.000	1.500	.050	8'	41.08	1'	8.24
221-4"	4.000	2.000	.055	8'	53.38	.5'	8.24

*Before shrinking. †After shrinking. §Available in black and clear only. ‡UL and CSA require that tubing be surface marked for identification. Alpha supplies the material from stock unmarked. If marking is required please indicate at time of ordering.

PACKAGED ASSORTMENTS

Assorted sizes of 6" lengths. Each length-size identified. **Colors:** Assorted.

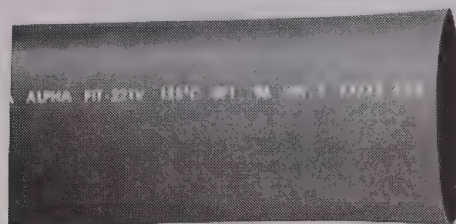
Mfr. No.	Tubing Size Range	Lengths per Box	Price Each
FIT-221-MS1	3/64"-3/16" (5 sizes)	6 per size (30 lengths)	\$12.35
FIT-221-MS2	1/4"-3/4" (4 sizes)	4 per size (16 lengths)	24.57
FIT-221-MS3	1"-4" (5 sizes)	2 per size (10 lengths)	22.86

FIT-221 (2:1) LT-LOW TEMPERATURE, HEAT SHRINKABLE TUBING

Alpha's FIT-221LT is a flame retardant polyolefin tubing that features a low recovery temperature of 90°C. FIT-221LT tubing is both UL recognized and CSA certified. Ideal for harnessing, wire bundling, and strain reliefs or any application where components or cables must be insulated or packaged. Its low recovery temperature enables quick installation with less potential damage to heat sensitive component insulation systems.

Mfr. No. FIT-	Size (In.)			4 Ft. Lengths		Spooled	
	Min. I.D.	Recov. I.D.	Std. Wall Thk.	Std. Pkg.	Price Per Spool	Std. Lengths (Ft.)	Price Per Spool
221LT-3/64"	.046	.023	.016	100'	\$23.57	1000	\$235.72
221LT-1/16"	.063	.023	.017	100'	24.00	1000	239.41
221LT-3/32"	.093	.046	.020	100'	27.26	500	136.32
221LT-1/8"	.125	.062	.020	100'	28.83	500	143.70
221LT-3/16"	.187	.093	.020	100'	34.93	500	174.66
221LT-1/4"	.250	.125	.025	100'	44.16	250	129.96
221LT-3/8"	.375	.187	.025	100'	49.27	200	98.55
221LT-1/2"	.500	.250	.025	20'	11.08	200	136.32
221LT-3/4"	.750	.375	.030	20'	14.91	250	186.38
221LT-1"	1.00	.500	.035	20'	20.87	250	260.93
221LT-1 1/2"	1.500	.750	.040	20'	38.77	125	242.28
221LT-2"	2.00	1.00	.045	20'	53.53	125	334.58

Standard Colors: Black, white, yellow, red, blue. * FIT-221LT is surface marked in accordance with UL and CSA requirements.



FIT-221 (2:1) V-HIGHLY FLAME RETARDANT POLYOLEFIN TUBING

A radiation cross-linked polyolefin heat-shrinkable tubing designed for a wide range of applications requiring a highly flame retardant material. Typical applications include electrical insulation, wire strain relief, light-weight harness jackets, and general purpose packaging of components. **Meets VW-1.** UL Recognized, CSA Certified*

Mfr. No. FIT-	Size (In.)			4 Ft. Lengths		6 In. Lengths	
	Min. I.D.	Recov. I.D.	Wall Thk.	Std. Pkg.	Price Each	Std. Pkg.	Price Each
221V-3/64"	.046	.023	.016	100'	\$22.34	20'	\$8.24
221V-1/16"	.063	.031	.017	100'	22.81	18'	8.24
221V-3/32"	.093	.046	.020	100'	25.87	16'	8.24
221V-1/8"	.125	.062	.020	100'	27.36	14'	8.24
221V-3/16"	.187	.093	.020	100'	33.23	12'	8.24
221V-1/4"	.250	.125	.025	100'	42.06	10'	8.24
221V-3/8"	.375	.187	.025	100'	46.85	8'	8.24
221V-1/2"	.500	.250	.025	20'	10.54	7'	8.24
221V-3/4"	.750	.375	.030	20'	14.16	6'	8.24
221V-1"	1.000	.500	.035	20'	19.78	4'	8.24
221V-1 1/2"	1.500	.750	.040	20'	36.86	2.5'	8.24
221V-2"	2.000	1.000	.045	20'	50.92	1.5'	8.24

Stock Color: Black. *FIT-2210 is surface marked in accordance with UL and CSA requirements.

PACKAGED ASSORTMENTS

Assorted sizes of 6" lengths. Each length-size identified. **Color:** Black.

Mfr. No.	Tubing Size Range	Lengths per Box	Price Each
FIT-221V-MS1	3/64"-3/16" (5 sizes)	6 per size (30 lengths)	\$12.35
FIT-221V-MS2	1/4"-3/4" (4 sizes)	4 per size (16 lengths)	24.57

FIT-221 (2:1) VC HIGHLY FLAME RETARDANT CLEAR POLYOLEFIN

Clear, translucent, heat shrinkable tubing is designed for a wide range of applications that require transparent, flame retardant materials. UL VW-1 rated. FIT-221VC contains no plasticizers and has a shrink temperature of 130°C. Typical applications include electrical insulation or environmental protection. It is especially useful when the properties of Kynar® are not needed, providing a more cost effective solution.

Mfr. No. FIT-	Size (In.)			4 Ft. Lengths		Spooled	
	Min. I.D.	Recov. I.D.	Std. Wall Thk.	Std. Pkg.	Price Per Spool	Std. Lengths (Ft.)	Price Per Spool
221VC-3/64"	.046	.023	.016	100'	\$31.67	1000	\$315.38
221VC-1/16"	.063	.031	.017	100'	32.23	1000	321.91
221VC-3/32"	.093	.046	.020	100'	36.49	500	182.61
221VC-1/8"	.125	.062	.020	100'	38.62	500	193.26
221VC-3/16"	.187	.093	.020	100'	47.00	500	234.58
221VC-1/4"	.250	.125	.025	100'	59.50	250	185.67
221VC-3/8"	.375	.187	.025	100'	66.74	200	133.48
221VC-1/2"	.500	.250	.025	20'	15.05	150	112.89
221VC-3/4"	.750	.375	.030	20'	20.02	250	250.28

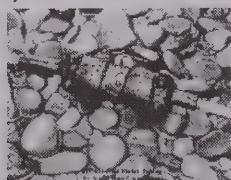
Stock Color: Clear.

®Kynar is a registered trademark of Pennwalt Corp.

ALSO AVAILABLE IN SMALL PACKAGED QUANTITY ASSORTMENTS, SMALL CUT PIECES AND FIT KIT SAMPLES SELECTION



FIT-621 (6:1) HIGH RATIO SHRINK TUBING

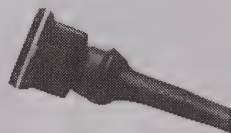


Designed for large-to-small cable connector transitions. FIT-621 shrinks approximately 6:1 at 120°C (250°F). The product's inner adhesive coating guarantees excellent protection from moisture. FIT-621 is suitable for direct burial, providing excellent insulation for cables rated to 1000V. FIT-621 is self-extinguishing and suitable for indoor and outdoor applications, giving it excellent field repairability. FIT-621 slips over the connector and backshell right to the area requiring repair. **Ultimate Elongation:** 350%. **Specific Gravity:** 1.1 maximum. **Longitudinal Shrinkage:** ± 10% nominal. **Low Temperature Flexibility:** No cracking after four-hour exposure at -40°C.

Mfr. No.	Min. Supplied I.D. (In.)	Max. Recovered I.D. (In.)	Price per 3 Pc. Bag	Price per 10 Pc. Bag
FIT-621-5/8	.60	.150	\$23.86	\$ 79.52
FIT-621-1/4	1.25	.220	24.92	83.07
FIT-621-2	2.00	.375	25.56	85.20
FIT-621-2 1/2	2.50	.500	41.11	137.03
FIT-621-3	3.00	.750	56.45	188.15
FIT-621-4	4.00	.900	89.46	298.20

Color: Black. **Standard Packaging:** 10 6" (5 ft.) lengths—all sizes 3-6" (1.5 ft.) lengths—all sizes.

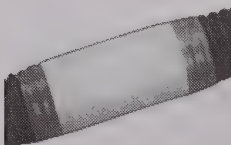
FIT-321 (3:1) ADHESIVE-WALL POLYOLEFIN TUBING



A dual-wall, irradiated tubing that shrinks, upon application of heat, to 33% of its original diameter. The inner wall melts and fills all crevices of the covered object while the outer wall shrinks. When cool, the entire mass becomes a tough molding that provides excellent environmental protection. **Ultimate Elongation:** 400% of nominal. **Longitudinal Shrinkage:** 10% nominal. **Color:** Black.

Mfr. No. FIT-	Size (In.)			4 Ft. Lengths		6 In. Lengths	
	Min. I.D.*	Recov. I.D.†	Wall Thk.	Std. Pkg.	Price Each	Std. Pkg.	Price Each
321-1/8	.120	.040	.040	100	\$134.96	14	\$34.44
321-1/4	.240	.080	.040	100	205.56	10	34.44
321-1/2	.470	.160	.070	20	54.05	7	34.44
321-1	.940	.320	.100	20	110.12	4	34.44
321-1 1/2	.157	.510	.100	20	181.04	2.5	34.44

FIT-350 (2:1) IRRADIATED KYNAR® TUBING



High-temperature, thin-wall tubing with excellent cut-through and abrasion resistance. Semi-rigid, polyvinylidene fluoride. The transparency permits easy inspection of covered components. **Ultimate Elongation:** 300%. **Longitudinal Shrinkage:** 5% nominal. **Water Absorption:** 0.5% max. **Color:** Clear. UL recognized, CSA certified**

Mfr. No. FIT-	Dimensions (In.)			4 Ft. Lengths		6 In. Lengths	
	Min. I.D.*	Recov. I.D.†	Wall Thk.	Std. Pkg.	Price Each	Std. Pkg.	Price Each
350-3/4	.046	.023	.010	100	\$ 72.28	16	\$12.35
350-1/8	.063	.023	.010	100	78.67	14	12.35
350-3/32	.093	.046	.010	100	92.30	12	12.35
350-1/4	.125	.062	.010	100	100.68	10	12.35
350-3/16	.187	.093	.010	100	156.63	8	12.35
350-1/2	.250	.125	.012	100	197.10	6	12.35
350-3/8	.375	.187	.012	100	259.15	4	12.35
350-1/2	.500	.250	.012	20	77.11	2	12.35
350-3/4	.750	.375	.017	20	141.72	1	12.35
350-1	1.000	.500	.019	20	260.57	.5	12.35

*Before shrinking. †After shrinking. ®Kynar is a registered trademark of Pennwalt Corp.

**UL and CSA require that FIT-350 be surface marked for identification. Alpha supplies the material from stock unmarked. If marking is required, please indicate at time of ordering.

FIT® Shrinkable Tubing

FIT-300 (3:1) IRRADIATED POLYOLEFIN TUBING OUTER WALL SHRINKS...INNER WALL MELTS

Because only the outer wall of this tubing is irradiated, when heat is applied, only this outer wall shrinks. **Ultimate Elongation:** 400% nominal. **Longitudinal Shrinkage:** 10% nominal. **Colors:** All products available in black as well as one additional color shown in table below.

Mfr. No. FIT-	Color	Size (In.)			4 Ft. Lgths.		6 In. Lgths.	
		Min. I.D.*	Recov. I.D.†	Wall Thk.	Std. Pkg.	Price Each	Std. Pkg.	Price Each
300-1/8	Brown	.125	.023	.038	100	\$146.69	7	\$15.76
300-3/16	Gray	.187	.060	.043	100	179.20	6	15.76
300-1/4	White	.250	.080	.047	100	223.08	5	15.76
300-3/8	Red	.375	.135	.050	100	248.07	4	15.76
300-1/2	Blue	.500	.195	.055	20	58.65	3	15.76
300-3/4	Yellow	.750	.313	.065	20	90.45	2	15.76
300-1	Blue	.300	.050	.100	100	509.35	2	15.76

300-1/8	Black	.125	.023	.038	100	\$ 97.84	7	\$10.51
300-3/16	Black	.187	.060	.043	100	119.42	6	10.51
300-1/4	Black	.250	.080	.047	100	148.67	5	10.51
300-3/8	Black	.375	.135	.050	100	165.57	4	10.51
300-1/2	Black	.500	.195	.055	20	39.19	3	10.51
300-3/4	Black	.750	.313	.065	20	60.35	2	10.51
300-1	Black	.300	.050	.100	100	339.52	2	10.51

*Before shrinking. †After shrinking. ‡ Heavy walled tubing.

FIT-105 (2:1) POLYVINYLCHLORIDE TUBING



High flexibility, strength, and 59% shrinkage make FIT-105 suitable for insulating components and cables with wide shape and size variations. Shrinks evenly and will not split. **Elongation:** 250% nominal. **Longitudinal Shrinkage:** 10% nominal. **Environmental Resistance:** Inert to fungus; excellent resistance to fuel, oil, hydraulic fluid, solvents, acids, and alkalis. Self-extinguishing. Non-corrosive. **Color:** Black. UL recognized, CSA certified**

Mfr. No. FIT-	Size (In.)			Price Per 25 Ft. Spool
	Min. I.D.*	Recov. I.D.†	Wall Thk.	
105-3/4	.046	.023	.020	\$ 7.81
105-1/8	.062	.031	.020	8.38
105-3/32	.093	.046	.020	9.51
105-1/4	.125	.062	.025	9.94
105-3/16	.187	.093	.025	12.21
105-1/2	.250	.125	.025	15.34
105-3/8	.375	.187	.030	17.04
105-1/2	.500	.250	.030	19.17
105-3/4	.775	.375	.035	25.84
105-1	1.000	.500	.040	36.07
105-1 1/2	1.500	.750	.045	67.86
105-2	2.000	1.000	.050	93.72

*Before shrinking. †After shrinking. ‡Pkg. of 500

**UL and CSA require that FIT-105 be surface marked for identification. Alpha supplies the material from stock unmarked. If marking is required, please indicate at time of ordering.

PACKAGED ASSORTMENTS

Assorted sizes of 6" lengths. each length-size identified. **Color:** Black.

Mfr. No.	Tubing Size Range	Lengths per Box	Price Each
FIT-105-MS1	3/64"-1/4" (6 sizes)	10 Lgths. per size (60 lengths)	\$14.20
FIT-105-MS2	3/16"-1" (4 sizes)	10 Lgths. per size (40 lengths)	22.44
FIT-105-MS3	1/2"-2" (2 sizes)	7 Lgths. per size (14 lengths)	22.01

FIT-421—HIGH SHRINK (4:1) POLYOLEFIN TUBING

FIT-421 meets the demand for a high shrink ratio fit over both connector and cable. Meets MIL-I-23053/5A Class 1 overexpanded, and AMS 3636D. Non-corrosive and self flame extinguishing.

Mfr. No. FIT-	Size (In.)			4 Ft. Lgths.	
	Min. I.D.	Recov. I.D.	Wall Thk.	Std. Pkg.	Price Each
421-1	1.000	.275	.045	20	\$151.94
421-1 1/2	1.500	.375	.045	20	178.78
421-2	2.000	.550	.045	20	205.62
421-3	3.000	.810	.045	8	94.29
421-4	4.000	1.050	.045	8	143.14

Stock Color: Black.



SIGNAL SURVIVAL

In most factories, you need to interconnect electronic equipment through some "not so pleasant" environments.

The cable better be tough!

XTRA•GUARD® –

The nastier your application, the better it performs. Five distinct types of **XTRA•GUARD®** are hazard matched according to the hostility of the environment.

ROBO•GUARD™

For applications in the automated manufacturing arena, that require flexibility and robotic compatibility.



Free Sample!

ROBO•GUARD™

Alpha's **ROBO•GUARD™** flexible cable meets the challenge of the most demanding applications.

- High Flex Life Cycle (tested to withstand over 2 million flexes)
- Protection Against Environmental Hazards
- Ideal For Applications Requiring Flexibility

- ☐ Please send me my free sample of **ROBO•GUARD™** flexible cable.
☐ Please send me my free sample of **XTRA•GUARD®** cable.
☐ Have a representative call to discuss my application needs.

Name

Company

Address

City State Zip

Phone

Application

No inquiries processed without phone number.

XTRA•GUARD®

TOUGH PROTECTION FOR TOUGH ENVIRONMENTS

XTRA•GUARD® and **ROBO•GUARD™** cables are designed to give optimum electrical performance when used in even the most hazardous applications.

No setting is too demanding for Alpha's **XTRA•GUARD®** product line. Whether it's indoors, outdoors, underground, underwater or at temperatures between -60° C and +150° C, there's an **XTRA•GUARD®** cable designed to meet the challenge!

To withstand the stress of continual, vigorous motion or flexing in both conventional and unusual applications, Alpha offers you **ROBO•GUARD™**.

When durability and flexibility are crucial to your cable's performance, Alpha makes the difference.

XGRG 11/93
ALPHA



PLEASE
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EDBA

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Dayton, OH 45449

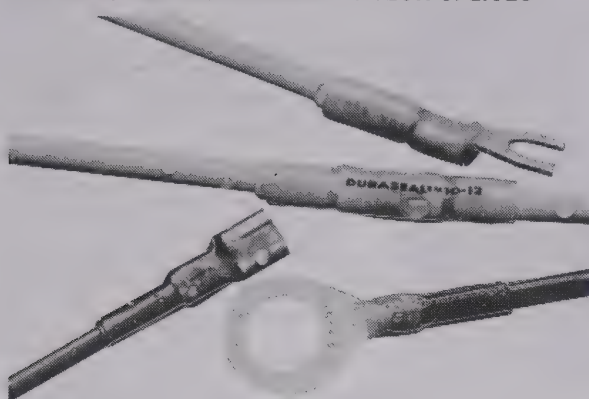
Send in your reply card
TODAY!
or call **TOLL FREE**
1-800-52 ALPHA





FIT[®] Shrinkable Tubing & Boots

FIT-CRIMP—SHRINKABLE NYLON SPLICES



WATERPROOF, BUTT CONNECTIONS Alpha's heat-shrinkable pre-insulated crimp splices completely seal electrical connections from corrosion caused by a water, salts and other contaminants. FIT[®]-CRIMP, light-weight and easy to install, is color-coded for easy identification of AWG size, yet transparent for visual inspection.

- Provides strain relief
- Insulates and protects electrical connections
- Added vibration protection in rugged environments
- Adhesive-lined for more reliable protection over conventional splices

Alpha No.	AWG Range of Barrel		Size (In.)		Price per Pkg.	
	Min.	Max.	Min. I.D.	Recov. I.D.	25 ft.	100 ft.
FIT-CRIMP 1	22	18	.145	.060	\$22.48	\$71.82
FIT-CRIMP 2	16	14	.180	.080	22.48	71.82
FIT-CRIMP 3	12	10	.250	.118	28.36	90.52
FIT-CRIMP 10	22	18	.145	.060	19.00	62.00
FIT-CRIMP 11	22	18	.145	.060	19.00	62.00
FIT-CRIMP 12	22	18	.145	.060	19.00	62.00
FIT-CRIMP 13	22	18	.145	.060	19.00	62.00
FIT-CRIMP 14	22	18	.145	.060	19.00	62.00
FIT-CRIMP 15	22	18	.145	.060	19.00	62.00
FIT-CRIMP 20	16	14	.180	.080	21.00	70.00
FIT-CRIMP 21	16	14	.180	.080	21.00	70.00
FIT-CRIMP 22	16	14	.180	.080	21.00	70.00
FIT-CRIMP 23	16	14	.180	.080	21.00	70.00
FIT-CRIMP 24	16	14	.180	.080	21.00	70.00
FIT-CRIMP 25	16	14	.180	.080	21.00	70.00
FIT-CRIMP 26	16	14	.180	.080	21.00	70.00
FIT-CRIMP 30	12	10	.250	.118	26.40	88.00
FIT-CRIMP 31	12	10	.250	.118	26.40	88.00
FIT-CRIMP 32	12	10	.250	.118	26.40	88.00
FIT-CRIMP 33	12	10	.250	.118	26.40	88.00
FIT-CRIMP 34	12	10	.250	.118	26.40	88.00
FIT-CRIMP 35	12	10	.250	.118	26.40	88.00
FIT-CRIMP 36	12	10	.250	.118	26.40	88.00

Standard Colors: Red (18-22 AWG), Blue (14-16 AWG), Yellow (10-12 AWG).

FIT-400 TEFLON HEAT SHRINKABLE TUBING

Requires less heat for use with heat-sensitive component, solid-state devices, solder joints. **Ultimate Elongation:** 300%. **Longitudinal Shrinkage:** 10% nominal. **Color:** Clear.

Alpha No.	Size, AWG	Expanded I.D. (In.)	Recovered I.D. (In.)	Nom. Wall Thck (In.)	Price/100 ft. Pkg.	
FIT-400-24	24	.032	.027	.008	\$ 84.80	
FIT-400-22	22	.037	.032	.008	88.80	
FIT-400-20	20	.046	.039	.008	92.60	
FIT-400-18	18	.061	.049	.008	96.40	
FIT-400-16	16	.076	.061	.009	108.00	
FIT-400-14	14	.093	.072	.009	111.80	
FIT-400-12	12	.116	.089	.009	115.80	
FIT-400-10	10	.142	.114	.010	125.20	
FIT-400-9	9	.159	.124	.010	171.20	
FIT-400-8	8	.181	.143	.010	179.20	
FIT-400-7	7	.198	.158	.011	212.40	
FIT-400-6	6	.227	.180	.011	222.80	
FIT-400-5	5	.249	.198	.011	223.20	
FIT-400-4	4	.292	.226	.011	246.40	
FIT-400-3	3	.312	.249	.011	286.80	
FIT-400-2	2	.367	.280	.012	307.20	
FIT-400-1	1	.400	.311	.012	328.80	
FIT-400-0	0	.442	.349	.012	365.40	

PACKAGE ASSORTMENTS IN 6" LENGTHS

Alpha No.	Size Range	No. Lengths/Box	Price/Box
FIT-650-MS-1	1/8"-1"	2 per size (14 Lengths)	\$237.60

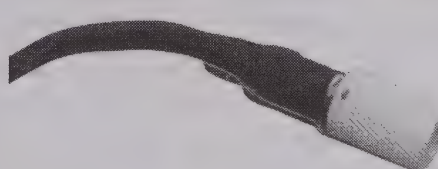
FIT "D" BOOT—HEAT SHRINKABLE D SUBMINIATURE CONNECTORS



- Simple installation and repair access
- Single part—no assembly required
- Smooth cable-to-cable connector transition
- Low profile, lightweight
- Flame retardant

Alpha No.	Size (Pin Connectors)	Size (In.)		Std. Put-up (PCS)	Price Each
		Min. I.D.	Recov. I.D.		
FIT-D-Boot-9	9	.42	.15	10	\$39.60
FIT-D-Boot-15	15	.42	.15	10	42.40
FIT-D-Boot-25	25	.42	.20	10	42.40
FIT-D-Boot-37	37	.42	.22	10	45.20

FIT-600 IRRADIATED NEOPRENE TUBING



A highly flexible, irradiated neoprene tubing with outstanding abrasion resistance properties. Widely used as a cable jacketing and harness material where maximum abrasion protection is required. **Ultimate Elongation:** 225%. **Longitudinal Shrinkage:** 6% nominal. **Color:** Black. UL Recognized, CSA Certified.

Alpha No.	Size	Size (In.)			Price per Pkg.	
		Min. I.D.*	Recov. I.D.†	Nom. Wall Thk.	25 ft.	100 ft.
FIT-600-1/4"	1/4"	.250	.143	.035	\$ 96.80	\$ 371.00
FIT-600-3/8"	3/8"	.365	.214	.040	115.80	443.60
FIT-600-1/2"	1/2"	.500	.286	.048	128.60	493.20
FIT-600-5/8"	5/8"	.625	.375	.052	144.60	554.40
FIT-600-3/4"	3/4"	.750	.428	.057	160.80	616.80
FIT-600-7/8"	7/8"	.875	.500	.065	179.80	689.40
FIT-600-1"	1"	1.00	.570	.070	196.20	752.20
FIT-600-1 1/4"	1 1/4"	1.25	.714	.087	272.00	1043.00
FIT-600-1 1/2"	1 1/2"	1.50	.857	.095	317.80	1218.00
FIT-600-1 3/4"	1 3/4"	1.75	1.00	.107	388.40	1489.20
FIT-600-2"	2"	2.00	1.14	.110	451.80	1732.20
FIT-600-3"	3"	3.00	1.71	.125	689.60	1335.20

* Before shrinking † After shrinking.

PACKAGE ASSORTMENTS IN 6" LENGTHS

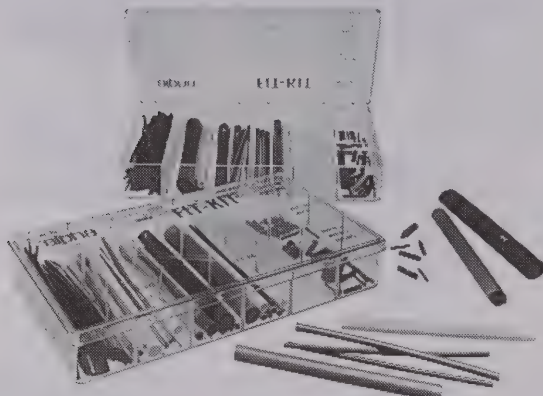
Alpha No.	Size Range	No. Lengths/Box	Price/Box
FIT-600-MS-1	24-14 (6 sizes)	5 per size (30 lengths)	\$14.40
FIT-600-MS-2	12-6 (6 sizes)	5 per size (30 lengths)	25.40
FIT-600-MS-3	5-0 (6 sizes)	5 per size (18 lengths)	26.20

UL and CSA require that Fit-600 be surfaced marked for identification. Alpha supplies the material from stock unmarked. If marking is required please indicate at time of ordering.



FIT[®] Kits & Solder Sleeves

FIT KITS—IDEAL R & D OR PROTOTYPE SAMPLERS



FIT KIT-1—Contains more than 70 6" lengths of 7 widely used types of FIT Tubing in a variety of colors. Compartmented clear plastic box allows easy storage and quick identification. Includes lengths of FIT-105, FIT-221, FIT-295, FIT-300, FIT-350, FITS CAPS AND FIT MARKERS. Size 11" W × 6½" D × 2" H.

Price Each \$46.29

FIT KIT-2—Contains all items in FIT KIT-1, plus 6" lengths of FIT-321, FIT-400, FIT-500, FIT-600, FIT-700 and 1" cut pieces of FIT-750. Kit is complete engineering, prototype, or laboratory inventory of all Alpha FIT Tubing. Consists of two 11" W × 6½" D × 2" H compartmented clear plastic boxes.

Price Each \$83.21

FIT KIT-7 FOR ELECTRONIC APPLICATIONS

Price Each \$62.76

CONTENTS OF FIT KIT-7

Mfr. No.	Materials	Sizes (Assorted Colors)	No. 6" Lengths*
FIT-105	Vinyl	7 sizes ⅛"-½"	14
FIT-130	Mylar [®]	6 sizes ⅜"-½"	12
FIT-221	2:1 Polyolefin	7 sizes ⅛"-½"	28
FIT-250	Nylon	5 sizes ⅛"-¼"	10
FIT-260	Ground Lead Polyolefin	3 sizes ⅛"-½"	6
FIT-300	Surface Irradiated Polyolefin	4 sizes ½"-¾"	8
FIT-321	3:1 Polyolefin	3 sizes ⅛"-½"	6
FIT-350	Kynar [®]	7 sizes ⅜"-½"	14
FIT-CRIMPS	Shrink Nylon Crimps	3 sizes 1-3	12

*Except FIT Crimps, 1¼" pcs.

[®]Mylar is a registered trademark of Du Pont.

[®]Kynar is a registered trademark of Pennwalt Corp.

FIT KIT-8 FOR ELECTRICAL/ INDUSTRIAL APPLICATIONS

Price Each \$113.32

CONTENTS OF FIT KIT-8

Mfr. No.	Material	Sizes (Assorted Colors)	No. 6" Lengths*
FIT-260	Ground Lead Polyolefin	4 sizes ⅛"-½"	12
FIT-600	Neoprene	5 sizes ¾"-1"	9
FIT-675	Silicone Rubber	5 sizes 5mm-21mm	5
FIT-700	Polyolefin Connector Sleeves	6 sizes 1-23	6
FIT-750	Adhesive Wall Polyolefin	4 sizes ¼"-1"	10
FIT-CRIMPS	Shrink Nylon Crimps	3 sizes 1-3	15

*Except FIT Crimps 1¼" pcs.

FIT KIT-10 FOR HIGH TEMPERATURE APPLICATIONS

Price Each \$166.28

CONTENTS OF FIT KIT-10

Mfr. No.	Material	Sizes (Assorted Colors)	No. 6" Lengths
FIT-350	Kynar [®]	8 sizes ⅛"-¾"	21
FIT-400	FEP Teflon [®]	9 sizes 20-4 AWG	24
FIT-500	TFE Teflon [®]	9 sizes 26-4 AWG	24
FIT-650	Viton	5 sizes ⅛"-¼"	7
FIT-675	Silicon Rubber	5 sizes 5mm-21mm	8

[®]Teflon is a registered trademark of Du Pont.

[®]Kynar is a registered trademark of Pennwalt Corp.

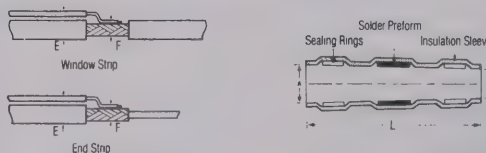
FIT KIT-6

A convenient assortment of 1" cut pieces (⅛", ¼", ⅜", ½"). Ideal for use on ground lugs, terminals, exposed wiring, and cable terminators. Maintenance technicians, and installers will find the FIT Kit-6 ideal for use in their work. Packaged in a plastic container.

Price Each \$14.63

FIT-SLV—SOLDERING SLEEVES

SOLDERING SLEEVE SELECTION GUIDE



1. Measure maximum diameter (E) and minimum diameter (F) of combined cable and ground lead.
2. Find appropriate Mfr. No. and sleeve size in the cable sleeve dimensions chart.

BRAID SHIELD GROUNDING SYSTEM

Alpha's FIT[®] Soldering Sleeve is a one piece, shield grounding termination system, featuring a strong, low-cost soldered connection which is completely insulated and encapsulated. It consists of a heat-shrinkable thermoplastic sleeve containing a precisely engineered preform of fluxed solder and thermoplastic inserts at each end. When placed over a cable shield and heated, the solder melts and flows, connecting the ground lead and shield. The outer sleeve shrinks and the thermoplastic inserts melt, encapsulating the termination. The result is a perfectly soldered, strain-relieved, and environmentally protected termination.

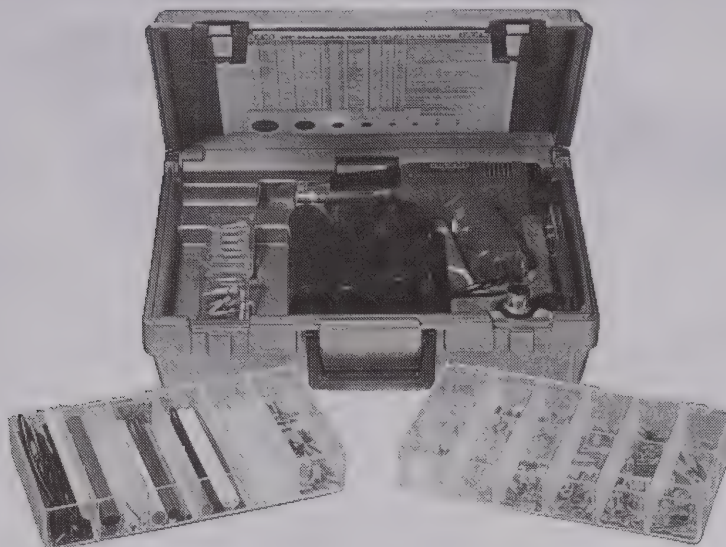
Reliable

Solder preform assures exact quantity of solder and flux, producing optimum solder connections for maximum strength, lowest voltage drop. Transparent heat-shrinkable insulating sleeve allows inspection of termination, provides long-life strain relief. Melttable inserts insure complete environmental protection.

Mfr. No.	Size (In.)					Pricing Per Pkg./25
	E Max.	F Min.	L Nom.	A Min.	B Min.	
105°C Series: Kynar® insulating sleeve containing solder alloy preform of 51.2% Tin, 30.6% Lead, 18.2% Cadmium.						
FIT-SLV-12	.140	.055	.700	.105	.105	\$27.39
FIT-SLV-14	.195	.085	.700	.195	.170	28.87
FIT-SLV-16	.295	.170	.800	.295	.275	40.02
125°C Series: Kynar® insulating sleeve containing preform of SN-63 composed of 63% Tin, 37% Lead.						
FIT-SLV-22	.140	.055	.700	.145	.105	\$25.11
FIT-SLV-24	.195	.085	.700	.195	.170	27.72
FIT-SLV-26	.295	.170	.800	.295	.275	38.38

[®]Kynar is a registered trademark of Pennwalt Corp.

PORTABLE FIT[®] KITS



Alpha has taken assortments of FIT heat shrinkable tubing and hardware devices and combined them with heat guns and termination tools for portability, convenience and problem solving at the jobsite. FIT kits contain all the material necessary for strain relief, splicing, connecting, environmental protection and cable repair needs.

A molded, rugged carrying case holds this combination of products and tools. The neatly organized kits include an informative product selection guide to provide the right tubing and hardware choice for your application. Case includes formed compartments for all components.

FIT-KIT-20

FIT-KIT-20—Shrinkable tubing kit combining an assortment of popular FIT Tubing types with a heat gun and attachments for use in the R & D lab or maintenance shop. Price Each **\$99.33**

FIT-KIT-20 Contents	Quantity	Re-Order Part No.	Re-Order Quantity	Price Each
Shrink Tubing Assortment	1	FIT KIT 1	1	\$46.29
Heat Gun	1	FIT GUN 3	1	42.13
Hook Reflector	1	GA-20	1	+
Concentrator Nozzle	1	GA-21	1	+

FIT-KIT-25

FIT-KIT-25—Portable cable repair and splice kit combining moisture resistant conductor butt splices, high shrink ratio outdoor jacketing tubing with crimp tool and heat gun for use in moisture resistant industrial applications. Price Each **\$116.47**

FIT-KIT-25 Contents	Quantity	Re-Order Part No.	Re-Order Quantity	Price Each
High Ratio Shrink Tubing	3 pcs.	FIT 621-2	1 pack†	\$25.56
Shrinkable Crimp Splice #16-14	25 pcs.	FIT CRIMP 2	1 pack*	15.96
Shrinkable Crimp Splice #12-10	25 pcs.	FIT CRIMP 3	1 pack*	20.14
Heat Gun	1	FIT GUN 3	1	42.13
Hook Reflector	1	GA-20	1	+
Concentrator Nozzle	1	GA-21	1	+
Splice Crimper Tool	1	AT300	1	41.86

*25 pcs. †3 pcs. ‡Sold only as part of kit.

FIT-KIT-30

FIT-KIT-30—Portable moisture resistant terminal and butt splice kit combining an assortment of popular sized, pre-insulated heat shrinkable sealed terminals and splices with crimp tool and heat gun for use in marine, transportation and process control applications. Price Each **\$145.91**

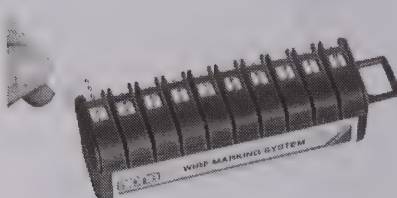
FIT-KIT-30 Contents	Quantity	Re-Order Part No.	Re-Order Quantity	Price Each /25 pcs.
Shrinkable Crimp Splice #22-18	10 pcs.	FIT CRIMP 1	1 pack*	\$15.96
Shrinkable Crimp Splice #16-24	10 pcs.	FIT CRIMP 2	1 pack*	15.96
Shrinkable Crimp Splice #12-10	10 pcs.	FIT CRIMP 3	1 pack*	20.14
Shrinkable Ring Terminal #22-18, 8	10 pcs.	FIT CRIMP 10	1 pack*	13.49
Shrinkable Ring Terminal #22-18, 10	10 pcs.	FIT CRIMP 11	1 pack*	13.49
Shrinkable Ring Terminal #16-14, 8	10 pcs.	FIT CRIMP 20	1 pack*	14.91
Shrinkable Ring Terminal #16-14, 10	10 pcs.	FIT CRIMP 21	1 pack*	14.91
Shrinkable Fork Terminal #16-14, 8	10 pcs.	FIT CRIMP 25	1 pack*	14.91
Shrinkable Fork Terminal #16-14, 10	10 pcs.	FIT CRIMP 26	1 pack*	14.91
Shrinkable Ring Terminal #12-10, 1	10 pcs.	FIT CRIMP 31	1 pack*	18.74
Shrinkable Ring Terminal #12-10, 1/4	10 pcs.	FIT CRIMP 32	1 pack*	18.74
Shrinkable Fork Terminal #12-10, 10	10 pcs.	FIT CRIMP 36	1 pack*	18.74
Heat Gun	1	FIT GUN 3	1	42.13†
Hook Reflector	1	GA-20	1	+
Concentrator Nozzle	1	GA-21	1	+
Splice Crimper Tool	1	AT300	1	41.86‡

*25 pcs. †Price Each. ‡Sold only as part of kit.

PRICES SHOWN ARE FOR REFERENCE ONLY. PLEASE CALL US FOR CURRENT QUOTES.



WIRE MARKING DISPENSER AND REFILLS



WMD-1



WMTR-1

WMD-1, Alpha's hand-held wire and marking dispenser, saves time and labor. Contains ten rolls of pre-cut markers. Rolls are numbered 0 through 9. Tape is 1/4" wide with 76 markers on a silicone release liner. WMTR-1 refill rolls come in boxes of ten, numbered 0 through 9. Individual roll compartments provide easy refill of single rolls without disturbing or dropping other rolls. **Operating Temperature:** -40°C to +121°C.

Alpha No.	Standard Package	Price Each	Point-of-Purchase Display Case	Price Each
WMD-1	Each (1 Dispenser of 10 rolls)	\$20.31	10 Piece Package (10 Dispensers of 10 rolls each)	\$202.21
WMTR-1	Each (1 Box of 10 rolls)	14.48	20 Piece package (20 Boxes of 10 rolls each)	289.68

Individual Marker Size: 1/4" wide x 1 1/4" long. **Each Roll Total Length:** 8 feet (96") long.

WRITE-ON TAPE WIRE & CABLE MARKER (WOT)



WOT, pre-marked and pre-cut to save time, offers a clear overwrap marker solution for permanent wire and cable protection. Each WOT dispenser has a roll of pre-cut, self-laminating markers on a silicone release liner. The user can write on the marker with a pen or pencil. The tape easily ejects from the dispenser. Constructed of tough, abrasion-resistant vinyl, WOT adheres well yet can be removed easily when desired. **Operating Temperature:** -40°C to +93°C. **Tape:** Flexible vinyl film (3.5 mil) coated with an aggressive, permanent acrylic, pressure-sensitive adhesive. **Adhesive:** A thermoset acrylic copolymer with good initial tack, peel and shear properties. **Nominal Tape Thickness:** 5 mils including adhesive. **Dimensional Stability:** Good. **Water Stability:** Excellent; aged 24 hours after application to stainless steel panel before testing. Not affected when immersed in 21°C water for seven days. **Humidity Stability:** Excellent. **Solvent Stability:** Good stability toward oils, aliphatic hydrocarbons and lower alkyl alcohols.

Alpha No.	No. of Markers	Marker (W x L) (In.)	Write-On Area (W x L) (In.)	Gauge Guide	Std. Pkg.	Price Each
WOT-1	300	3/4 x 1 1/4	3/4 x 5/8	16 AWG to 2 AWG	1 Roll	\$7.81
WOT-2	150	3/4 x 1 1/2	3/4 x 1 1/2	2 AWG to 1/0	1 Roll	7.81
WOT-3	90	3/4 x 3	3/4 x 3/4	1/0 to 250 mcm	1 Roll	8.38
WOT-6	40	3/4 x 6	3/4 x 1	250 to 1000 mcm	1 Roll	8.38

Identification Products

WIRE MARKING SYSTEM BOOKLETS (WIS)



Alpha's Wire Marking System (WIS) offers ten different booklets of wire markers and pre-cut matching terminal markers. Each booklet includes ten pages of pre-cut, self-laminating wire markers on silicone release paper. Markers are 1/4" wide by 1 1/4" long with an additional one character long terminal marker. Each strip, perforated across the center, can be used on small or larger wire. WIS is ideal for label/wire marker applications requiring strength, dimensional stability and chemical and water resistance. **Operating Temperature:** -40°C to +121°C. **Physical Properties:** DuPont Tyvek™ spunbonded polyolefin; pressure-sensitive coating with permanent acrylic adhesive on silicone release paper; nominal thickness, 7 mils including adhesive; low-glaring print on a bright white surface; abrasion resistant. **Chemical Properties:** Resists oil and water.

Alpha No.	Quantity (Each)	Description/ Legend	Standard Pkg. (Each)	Price Each
WIS-1	45 Markers	0 thru 9	1 Booklet	\$5.96
WIS-2	10 Markers	A-Z, 1-15, +, -, /	1 Booklet	5.96
WIS-3	10 Markers	1 thru 45	1 Booklet	5.96
WIS-4	150 Markers	1, 2, 3	1 Booklet	5.96
WIS-5	150 Markers	A, B, C	1 Booklet	5.96
WIS-6	150 Markers	T1, T2, T3	1 Booklet	5.96
WIS-7	150 Markers	L1, L2, L3	1 Booklet	5.96
WIS-8	10 Markers	46 thru 90	1 Booklet	5.96
WIS-9	45 Markers	10 NEMA colors	1 Booklet	5.96
WIS-10	45 Markers	+ , - , AC, DC	1 Booklet	5.96
	33 Markers	POS, NEG, GND		
	27 Markers	NEUT		
	21 Markers	Spare, blank		

HEAT SHRINKABLE IDENTIFICATION SYSTEM



FIT®-PRINT

- Flame retardant
- Smear resistant after shrinking
- Mark permanence after shrinking
- Four sizes for economical applications
- Prints six lines per inch
- No waste in plant
- On-site application
- Can use on standard office printers
- Bright yellow for high visibility
- White for clarity
- Field identification with Alpha Heat Gun
- UL Recognized

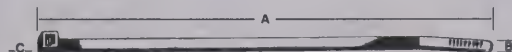
FIT®-PRINT markers are designed to meet the wire identification needs of the electronic interconnect, industrial, computer office automation, marine and electrical markets. Sleeves, of durable polyolefin tubing with a 3:1 shrink ratio, are designed for smear-resistant, permanent identification. The sleeves feed directly into standard typewriters or dot matrix printers. Resistant to abrasion, cleaning solvents, and industrial fluids. **Operating Temperature:** -30°C to +105°C. **Tensile Strength:** 1200 psi. **Ultimate Elongation:** 150%. **Longitudinal Change:** 20%. **Print Performance:** Legible. **Chemical Properties:** Flammability (UL 224). **Dielectric Strength:** 500 volts/mil min.

FIT-PRINT No.	AWG		Min. Suppl. I.D. (In.)	Recovered		Rec. Use Range	Non-Sleeve Progressn.	Price Each
	Min.	Max.		Max. I.D. (In.)	Wall Thk. (In.)			
1/4	22	16	.125	.042	.023 ± .003	.044 to .101	.500	\$ 68.73
1/4	16	8	.250	.083	.023 ± .003	.091 to .219	.666	78.57
1/2	8	2	.500	.166	.024 ± .003	.183 to .425	1.666	177.73
1	2	400	1.000	.333	.025 ± .003	.366 to .876	2.000	205.30

Colors: Yellow-white. **Standard Package:** 250/spool/box.

DENNISON BAR-LOK® CABLE TIES

Bar-Lok® cable ties are available in natural, heat stabilized (HS) and weather resistant (WR) black. Ties meet or exceed MIL-S-23190D, MS3367, and MS3368.

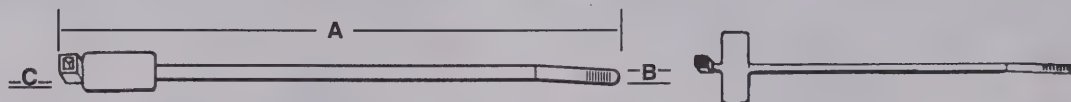


Dennison Number	Color	Length (In.)	Max. Bundle Dia. (In.)	Tensile Strength (Lbs)	Package Quantity (Bag)	Carton Quantity	Price* Per 1000
08429	Natural	3.25	5/8	18	1000	25M	\$ 12.28†
08510	Black WR	3.25	5/8	18	1000	25M	14.14†
08509	Black HS	3.25	5/8	18	1000	25M	13.51†
08519	Natural	3.25	5/8	18	100	1M	19.19
08337	Black WR	3.25	5/8	18	100	1M	22.08
08432	Natural	4.0	7/8	18	1000	25M	11.47†
08433	Black WR	4.0	7/8	18	1000	25M	13.19†
08404	Black HS	4.0	7/8	18	1000	25M	12.62†
08508	Red	4.0	7/8	18	1000	25M	13.47†
08582	Orange	4.0	7/8	18	1000	25M	13.47†
08583	Yellow	4.0	7/8	18	1000	25M	13.47†
08584	Green	4.0	7/8	18	1000	25M	13.47†
08585	Brown	4.0	7/8	18	1000	25M	13.47†
08586	Purple	4.0	7/8	18	1000	25M	13.47†
08587	Blue	4.0	7/8	18	1000	25M	13.47†
08465	Gray	4.0	7/8	18	1000	25M	13.47†
08421	Natural	4.0	7/8	18	1000/Box	5M	14.33
08420	Black WR	4.0	7/8	18	1000/Box	5M	16.47
08434	Natural	4.0	7/8	18	100	1M	17.86
08435	Black WR	4.0	7/8	18	100	1M	20.53
10391	Natural	6.0	1 1/2	18	1000	5M	20.59
10392	Black HS	6.0	1 1/2	18	1000	5M	22.71
10393	Black WR	6.0	1 1/2	18	1000	5M	23.69
10394	Natural	6.0	1 1/2	18	100	1M	26.36
10395	Black HS	6.0	1 1/2	18	100	1M	29.00
10396	Black WR	6.0	1 1/2	18	100	1M	30.32
10325	Natural	8.0	2 1/4	18	1000	5M	24.94
10326	Black HS	8.0	2 1/4	18	1000	5M	27.44
10327	Black WR	8.0	2 1/4	18	1000	5M	28.68
10328	Natural	8.0	2 1/4	18	100	1M	31.91
10329	Black HS	8.0	2 1/4	18	100	1M	35.11
10330	Black WR	8.0	2 1/4	18	100	1M	36.70
08376	Natural	5.5	1 1/4	40	1000	5M	22.31
08431	Black WR	5.5	1 1/4	40	1000	5M	25.65
08400	Black HS	5.5	1 1/4	40	1000	5M	24.54
08383	Natural	5.5	1 1/4	40	1000	1M	29.29
08384	Black WR	5.5	1 1/4	40	1000	1M	33.68
08470	Natural	7.0	1 3/4	40	1000	5M	25.92
08472	Black HS	7.0	1 3/4	40	1000	5M	27.18
08476	Natural	7.0	1 3/4	40	100	1M	38.22
08478	Black HS	7.0	1 3/4	40	100	1M	40.11
08377	Natural	8.0	2 1/4	40	1000	5M	32.25
08380	Black WR	8.0	2 1/4	40	1000	5M	37.09
08401	Black HS	8.0	2 1/4	40	1000	5M	35.47
08760	Brown	8.0	2 1/4	40	1000	5M	38.43
08690	Red	8.0	2 1/4	40	1000	5M	38.43
08671	Blue	8.0	2 1/4	40	1000	5M	38.43
08780	Orange	8.0	2 1/4	40	1000	5M	38.43
08782	Yellow	8.0	2 1/4	40	1000	5M	38.43
08664	Green	8.0	2 1/4	40	1000	5M	38.43
08680	Purple	8.0	2 1/4	40	1000	5M	38.43
10019	Gray	8.0	2 1/4	40	1000	5M	38.43
08385	Natural	8.0	2 1/4	40	100	1M	42.65
08386	Black WR	8.0	2 1/4	40	100	1M	49.06
08471	Natural	11.0	3.0	40	1000	5M	38.81
08473	Black HS	11.0	3.0	40	1000	5M	42.69
08477	Natural	11.0	3.0	40	100	1M	55.53
08479	Black HS	11.0	3.0	40	100	1M	61.09
10335	Natural	15.0	2 1/4	40	1000	5M	86.77
10336	Black HS	15.0	2 1/4	40	1000	5M	95.45
10338	Natural	15.0	2 1/4	40	100	1M	94.19
10339	Black HS	15.0	2 1/4	40	100	1M	103.61
08387	Natural	7.5	1 3/4	50	1000	5M	33.87
08388	Black WR	7.5	1 3/4	50	1000	5M	38.96
08402	Black HS	7.5	1 3/4	50	1000	5M	37.27
08436	Natural	7.5	1 3/4	50	100	1M	42.90
08437	Black WR	7.5	1 3/4	50	100	1M	49.34
10001	Natural	7.5	1 3/4	50	1000	5M	30.76
10003	Black HS	7.5	1 3/4	50	1000	5M	33.85
10004	Natural	7.5	1 3/4	50	100	1M	38.97
10005	Black HS	7.5	1 3/4	50	100	1M	42.97
08600	Natural	11.0	3.0	50	1000	5M	72.02
08286	Black WR	11.0	3.0	50	1000	5M	82.78
08056	Black HS	11.0	3.0	50	1000	5M	79.18
08859	Natural	11.0	3.0	50	100	1M	83.06
08930	Black WR	11.0	3.0	50	100	1M	95.53
10036	Natural	15.0	4.0	50	500	5M	96.11
10037	Black WR	15.0	4.0	50	500	5M	110.53
08427	Natural	15.0	4.0	50	100	1M	95.85
08428	Black WR	15.0	4.0	50	100	1M	110.22
08416	Black HS	15.0	4.0	50	100	1M	105.43
10006	Natural	15.0	4.0	50	100	1M	85.55
10008	Black HS	15.0	4.0	50	100	1M	94.10
10038	Natural	14.5	4.0	120	100	1M	162.83
10039	Black WR	14.5	4.0	120	100	1M	187.25
08403	Black HS	14.5	4.0	120	100	1M	179.12
08378	Natural	14.5	4.0	120	50	1M	175.97
08382	Black WR	14.5	4.0	120	50	1M	202.38
10049	Natural	33.00	10.0	175	25	250	382.51
10050	Black WR	33.00	10.0	175	25	250	439.88

*CALL FOR PRICING ON QUANTITIES OF 5M AND OVER.

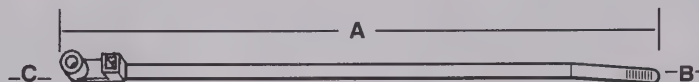
†CALL FOR PRICING ON QUANTITIES OF 25M AND OVER.

I.D. TIES



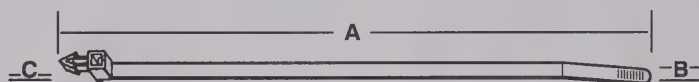
Dennison Number	Color	Length (In.)	Max. Bundle Dia. (In.)	Tensile Strength (Lbs.)	Package Quantity (Bag)	Carton Quantity	Price* Per 1000
08412	Natural	4.0	7/8	18	1000	5M	\$ 62.14
10031	White	4.0	7/8	18	1000	5M	71.47
08417	Natural	4.0	7/8	18	100	1M	84.40
08413	Natural	7.5	1 1/4	50	1000	5M	111.50
08419	Natural	7.5	1 1/4	50	100	1M	151.44

SCREW MOUNT TIES



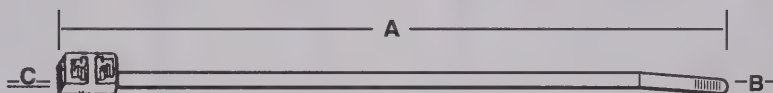
08415	Natural	7.5	1 1/4	50	1000	5M	\$ 67.39
08444	Black WR	7.5	1 1/4	50	1000	5M	77.50
08443	Black HS	7.5	1 1/4	50	1000	5M	74.13
08484	Natural	7.5	1 1/4	50	100	1M	80.44
08318	Black WR	7.5	1 1/4	50	100	1M	92.55
10350	Natural	11.0	3.0	50	1000	5M	74.12
10352	Black WR	11.0	3.0	50	1000	5M	85.24
10351	Black HS	11.0	3.0	50	1000	5M	81.55
10353	Natural	11.0	3.0	50	100	1M	88.49
10354	Black WR	11.0	3.0	50	100	1M	101.80
10035	Natural	14.5	4.0	120	100	1M	245.02
10040	Black WR	14.5	4.0	120	100	1M	281.79
08441	Black HS	14.5	4.0	120	100	1M	270.11
08426	Natural	14.5	4.0	120	50	1M	253.97
08442	Black WR	14.5	4.0	120	50	1M	292.05

PUSH MOUNT TIES



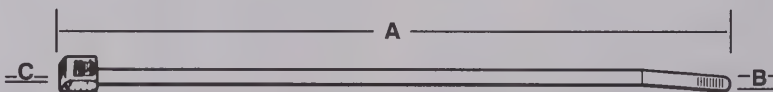
08414	Natural	7.5	1 1/4	50	1000	5M	\$ 84.52
08446	Black WR	7.5	1 1/4	50	1000	5M	97.19
08445	Black HR	7.5	1 1/4	50	1000	5M	92.97
08439	Natural	7.5	1 1/4	50	100	1M	88.85
10355	Natural	11.0	3.0	50	1000	5M	92.97
10357	Black WR	11.0	3.0	50	1000	5M	106.91
10356	Black HR	11.0	3.0	50	1000	5M	102.27
10358	Natural	11.0	3.0	50	100	1M	97.74
10359	Black WR	11.0	3.0	50	100	1M	112.01

DOUBLE HEADED CABLE TIES



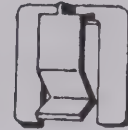
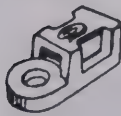
10424	Natural	7.5	1 1/4	50/50	1000	5M	\$ 87.05
10426	Black WR	7.5	1 1/4	50/50	1000	5M	100.11
10425	Black HS	7.5	1 1/4	50/50	1000	5M	95.76
10427	Natural	7.5	1 1/4	50/50	100	1M	91.56
10429	Black WR	7.5	1 1/4	50/50	100	1M	105.11
10428	Black HS	7.5	1 1/4	50/50	100	1M	100.55
10430	Natural	11.0	3.0	50/50	1000	5M	95.76
10432	Black WR	11.0	3.0	50/50	1000	5M	110.12
10431	Black HS	11.0	3.0	50/50	1000	5M	105.33
10433	Natural	11.0	3.0	50/50	100	1M	100.72
10435	Black WR	11.0	3.0	50/50	100	1M	115.62
10434	Black HS	11.0	3.0	50/50	100	1M	110.60

RELEASABLE CABLE TIES

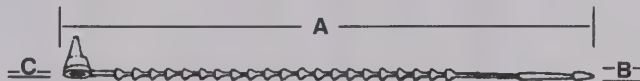


10361	Natural	7.5	1 1/4	50	1000	5M	\$ 64.55
10363	Black WR	7.5	1 1/4	50	1000	5M	73.26
10362	Black HS	7.5	1 1/4	50	1000	5M	70.35
10364	Natural	7.5	1 1/4	50	100	1M	101.01
10366	Black WR	7.5	1 1/4	50	100	1M	114.38
10365	Black HS	7.5	1 1/4	50	100	1M	110.09
10367	Natural	11.0	3.0	50	1000	5M	167.95
10369	Black	11.0	3.0	50	1000	5M	190.20
10368	Black HS	11.0	3.0	50	1000	5M	183.04
10370	Natural	11.0	3.0	50	100	1M	248.53
10372	Black WR	11.0	3.0	50	100	1M	282.07
10371	Black HS	11.0	3.0	50	100	1M	270.89

*CALL FOR PRICING ON QUANTITIES OF 5M AND OVER.


CABLE TIE ACCESSORY PRODUCTS

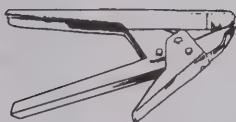
Dennison Number	Description	Package Quantity	Carton Quantity	Price* Per 1000
08461	3/4" Acrylic adhesive mount for miniature ties	100/Bag	1M	\$109.73
10029	3/4" Rubber based adhesive mount for miniature ties	100/Bag	1M	109.73
08462	1" Acrylic adhesive mount for intermediate and standard ties	100/Bag	1M	151.69
10030	1" Rubber based adhesive mount for intermediate and standard ties	100/Bag	1M	151.69
08463	1" Plain backed mount for intermediate and standard ties	100/Bag	1M	127.52
10027	Tie anchor base #8 screw	100/Bag	1M	57.60
10028	Tie anchor base #10 screw	100/Bag	1M	57.60
10056	Push-in mount 1/4" hole	100/Bag	1M	76.26
10044	Cradle mount small #4 screw	100/Bag	1M	68.76
10045	Cradle mount medium #8 screw	100/Bag	1M	80.69
10046	Cradle mount large #10 screw	100/Bag	1M	99.95
10079	Cradle mount large 1/4" screw heat stabilized	100/Bag	1M	109.93
08406	Adhesive flat cable clip	100/Bag	1M	217.95
08458	Low profile mount #8 screw	100/Bag	1M	122.19
08457	Identification plate 1 1/2" x 3/4"	100/Bag	1M	85.43


SECUR-A-TIE® FASTENERS

Dennison Number	Style	Length (in.)	Max. Bundle Dia. (in.)	Tensile Strength (Lbs)	Package Quantity	Carton Quantity	Price* Per 1000
08350	Natural	5.0	1 3/8"	18.0	5000/Box	50M	\$ 9.14
08351	Nat'l Releasable	5.0	1 3/8"	18.0	5000/Box	50M	9.14
08347	Purple	5.0	1 3/8"	18.0	5000/Box	50M	9.14
08354	Red	5.0	1 3/8"	18.0	5000/Box	50M	9.14
08355	Yellow	5.0	1 3/8"	18.0	5000/Box	50M	9.14
08361	Brown	5.0	1 3/8"	18.0	5000/Box	50M	9.14
08356	Blue	5.0	1 3/8"	18.0	5000/Box	50M	9.14
08360	Grey	5.0	1 3/8"	18.0	5000/Box	50M	9.14
08358	Orange	5.0	1 3/8"	18.0	5000/Box	50M	9.14
08359	Black	5.0	1 3/8"	18.0	5000/Box	50M	9.14
08357	Green	5.0	1 3/8"	18.0	5000/Box	50M	9.14
08362	Nat'l Polypropylene	5.0	1 3/8"	8.0	5000/Box	50M	13.78
08320	Natural Nylon	8.0	2.0	18.0	2000/Box	20M	23.37

SECUR-A-SEAL™ POLYPROPYLENE FASTENERS

Dennison Number	Color	Length (in.)	Max. Bundle Dia. (in.)	Tensile Strength (Lbs)	Package Quantity	Carton Quantity	Price* Per 1000
08319	Natural	8.0	2.0	8.0	2000/Box	20M	\$33.37
10146	Red	8.0	2.0	8.0	2000/Box	20M	33.37
10147	Orange	8.0	2.0	8.0	2000/Box	20M	33.37
10148	Yellow	8.0	2.0	8.0	2000/Box	20M	33.37
10149	Green	8.0	2.0	8.0	2000/Box	20M	33.37
10150	Blue	8.0	2.0	8.0	2000/Box	20M	33.37
10151	Purple	8.0	2.0	8.0	2000/Box	20M	33.37
10152	Brown	8.0	2.0	8.0	2000/Box	20M	33.37
10153	Slate	8.0	2.0	8.0	2000/Box	20M	33.37
10154	Black	8.0	2.0	8.0	2000/Box	20M	33.37
10155	White	8.0	2.0	8.0	2000/Box	20M	33.37

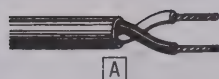
CABLE TIE INSTALLATION TOOLS


Dennison Number	Description	Package Quantity	Qty/Selling Quantity	Price Each
08480	Hand tool for miniature, intermediate, and standard cable ties	1	1	\$ 83.34
08381	Pneumatic hand tool for miniature, intermediate, and standard cable ties	1	1	217.65
10257	Extra heavy duty tool for standard, heavy duty and extra heavy duty cable ties	1	1	51.08
10639	Heavy duty tool for standard and heavy duty cable ties	1	1	185.77
10624	Lightweight hand tool for miniature, intermediate and standard cable ties	1	.....	21.30

*CALL FOR PRICING ON QUANTITIES OF 5M AND OVER.

MULTICONDUCTOR UNSHIELDED—CONTROL AND AUDIO CABLE

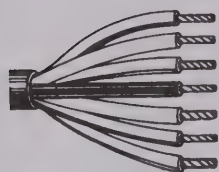
Tinned copper conductors with PVC insulation and chrome PVC jacket, except as noted.



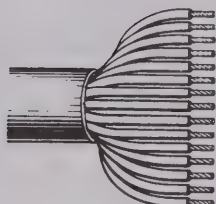
A



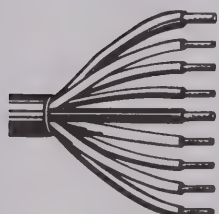
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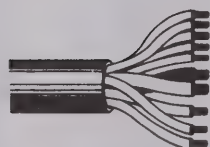
C



D



E



F



G

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Conds.	Nom. O.D. (In.)
8795*	CM	A	22 (Solid)†	2	.160
8794*	CM	A	22 (Solid)†	3	.168
9794*	MP/CM	A	22 (Solid)†	4	.190
8442	CM	A	22 (7 × 30)	2	.165
8443	CM	B	22 (7 × 30)	3	.164
8444	CM	B	22 (7 × 30)	4	.182
8445	CM	B	22 (7 × 30)	5	.194
9430	CM	B	22 (7 × 30)	7	.214
9421	CM	B	22 (7 × 30)	8	.229
9423	CM	B	22 (7 × 30)	9	.244
8456	CM	B	22 (7 × 30)	10	.264
8457	CM	B	22 (7 × 30)	12	.264
8458	CM	B	22 (7 × 30)	15	.330
9431	CM	B	22 (7 × 30)	29	.345
8459	CM	B	22 (7 × 30)	25	.370
9432	CM	B	22 (7 × 30)	30	.400
9433	CM	B	22 (7 × 30)	40	.455
9434	CM	B	22 (7 × 30)	50	.500
9444	CM	C	20 (10 × 30)	4	.217
9445	CM	C	20 (10 × 30)	5	.239
9439	CM	C	20 (10 × 30)	7	.260
9455	CM	C	20 (10 × 30)	9	.317
9457	CM	C	20 (10 × 30)	12	.338
9458	CM	C	20 (10 × 30)	15	.389
8489	CM	C	18 (16 × 30)	4	.264
8465	CM	C	18 (16 × 30)	5	.286
8467	CM	C	18 (16 × 30)	7	.324
8469	CM	C	18 (16 × 30)	9	.379
8466	CM	C	18 (16 × 30)	12	.412
8468	CM	C	18 (16 × 30)	15	.505
8619	CM	C	18 (16 × 30)	19	.505
9626	CM	C	18 (16 × 30)	25	.600
8620	.....	D	16 (19 × 29)	4	.375
9620	.....	D	16 (19 × 29)	5	.405
8621	.....	D	16 (19 × 29)	7	.455
9721	.....	D	16 (19 × 29)	8	.495
9621	.....	D	16 (19 × 29)	8	.520
8622	.....	D	16 (19 × 29)	8	.520
8623	.....	D	16 (19 × 29)	15	.670
8624	.....	D	16 (19 × 29)	19	.700
9622	.....	D	16 (19 × 29)	25	.850
8627	.....	D	14 (19 × 27)	4	.495
9623	.....	D	14 (19 × 27)	5	.545
8628	.....	D	14 (19 × 27)	7	.615
8629	.....	D	14 (19 × 27)	12	.800
8446	CM	E	22 (7 × 30)	4	.236
8448	CM	E	18 (16 × 30)	2	.236
8448	CM	E	22 (7 × 30)	6	.258
9406	CM	E	18 (16 × 30)	2	.258
9406	CM	E	18 (16 × 30)	6	.345
9406	CM	E	16 (26 × 30)	2	.345

* Jacket color rose gray. † Polyethylene insulation over bare copper conductor.

NEOPRENE RETRACTILE CABLES

Bare copper conductors, paper wrap, rubber insulated, cabled with fillers, paper tape wrap, black neoprene jacket, 12" straight portion at each end (except 6" on 8601 and 8603). Jacket removed 1 1/2" or 1 3/4" each end. Color coding: White, black, green, red.

174 Each End: Color Coding: White, Black, Green, Red.									
Belden Number	NEC Type	Fig.	Length		No. of Conds.	Insul. Thckns. (In.)	Jacket Thckns. (In.)	Cable O.D. (In.)	Coil O.D. (In.)
			Rtractd. (In.)	Extndd. (Ft.)					
18 GAUGE									
8601		G	12	6	2	.016	.045	.270	1 ⁵ / ₁₆
9476		G	24	12	2	.016	.045	.270	1 ⁵ / ₁₆
9477		G	48	25	2	.016	.045	.270	1 ⁵ / ₁₆
9478		G	24	12	3	.016	.045	.270	1 ⁵ / ₁₆
9479		G	48	25	3	.016	.045	.270	1 ⁵ / ₁₆
9482		G	24	12	4	.031	.045	.385	1 ⁷ / ₁₆
9483		G	48	25	4	.031	.045	.385	1 ⁷ / ₁₆
16 GAUGE									
8603		G	12	6	3	.031	.045	.370	1 ⁷ / ₁₆
9484		G	24	12	3	.031	.045	.370	1 ⁷ / ₁₆
9485		G	48	25	3	.031	.045	.370	1 ⁷ / ₁₆

THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS
WE HAVE AVAILABLE. PLEASE
CONTACT US FOR ADDITIONAL PRODUCT INFORMATION.

Not authorized at all locations. Please call for
complete information.

PAIRED, UNSHIELDED CABLES

Tinned copper (except 8486), PVC insulated, twisted pairs, PVC jacket.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Pairs	Nom. O.D. (In.)
8740	CM	A	22 (Solid)	1	.150
8741	MP/CM	A	22 (Solid)	2	.209
8742	MP/CM	A	22 (Solid)	3	.244
8757	MP/CM	A	22 (Solid)	4	.259
8743	MP/CM	A	22 (Solid)	6	.305
9160	MP/CM	A	22 (Solid)	8	.346
8744	MP/CM	A	22 (Solid)	9	.354
8746	MP/CM	A	22 (Solid)	27	.535
8442	CM	B	22 (7 × 30)	1	.165
9744	CM	B	22 (7 × 30)	2	.238
9745	CM	B	22 (7 × 30)	3	.284
9746	CM	B	22 (7 × 30)	4	.299
8747	CM	B	22 (7 × 30)	6	.320
8748	CM	B	22 (7 × 30)	9	.389
9747	CM	B	22 (7 × 30)	12	.425
8749	CM	B	22 (7 × 30)	15	.440
9748	CM	B	22 (7 × 30)	19	.505
9749	CM	B	22 (7 × 30)	23	.555
8750	CM	B	22 (7 × 30)	27	.575
8205	CM	C	20 (10 × 30)	1	.190
9750	CM	C	20 (10 × 30)	3	.309
9751	CM	C	20 (10 × 30)	6	.376
9752	CM	C	20 (10 × 30)	9	.439
9755	CM	C	20 (10 × 30)	15	.545
8486	CM	D	19 (Solid)	1	.182
8461	MP/CM	B	18 (7 × 26)	1	.226
9740	CM	A	18 (16 × 30)	1	.224
9156	CM	A	18 (16 × 30)	2	.287
8690	CM	A	18 (16 × 30)	3	.362
9157	CM	A	18 (16 × 30)	4	.358
9159	CM	A	18 (16 × 30)	5	.416
8691	CM	A	18 (16 × 30)	6	.475
9161	CM	A	18 (16 × 30)	8	.478
8692	CM	A	18 (16 × 30)	9	.575
9741	CM	A	18 (16 × 30)	12	.675
9742	CM	A	18 (16 × 30)	15	.735
9743	CM	A	18 (16 × 30)	19	.865
8471	CM	B	16 (19 × 29)	1	.260
8473	CL3	B	14 (19 × 27)	1	.332
8477	CL3	B	12 (19 × 25)	1	.384
82444	CMP	B	22 (7 × 30)	2	.126
82489	CMP	B	18 (19 × 30)	2	.167
82418	CMP	H	18 (19 × 30)	2	.182

MULTICONDUCTOR OVERALL SPIRAL WRAPPED SHIELDED CABLES

Tinned copper, PVC insulated, conductors cabled, tinned copper spiral wrapped shield chrome PVC jacket.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Conds.	Nom. O.D. (In.)	Cap.,* pF	Cap.,† pF
8737	CM	E	22 (7 × 30)	2	.170	40	70
8759	CM	E	20 (7 × 28)	2	.199	47	79
8790	MP/CM	E	18 (7 × 26)	2	.241	53	92
8791	.....	F	18 (7 × 26)	3	.260	47	84
8780	CM	E	16 (19 × 20)	2	.266	57	98

Direct Burial Cables

9683	CM	G	20 (10 × 30)	6‡	.340	30	55
9686	CM	G	20 (10 × 30)	12‡	.480	30	55
9438	.....	I	14 (104 × 34)	1	.139	.....	.....

* Capacitance between conductors. † Capacitance between one conductor and shield. ‡ Twisted in pairs.

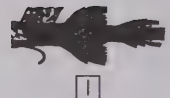
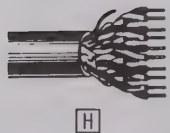
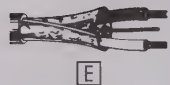
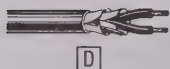
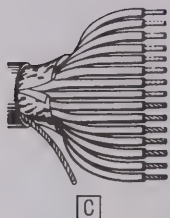
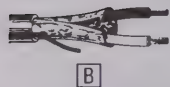
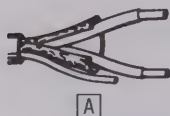
INDIVIDUALLY SHIELDED AND JACKETED AUDIO CABLE

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Pairs	Nom. O.D. (In.)	Cap.,* pF	Cap.,† pF
1217A		G	22 (7 × 30)	4	.405	32	58
1218A		G	22 (7 × 30)	6	.475	32	58
1219A		G	22 (7 × 30)	9	.575	32	58
1220A		G	22 (7 × 30)	12	.655	32	58
1222A		G	22 (7 × 30)	16	.735	32	58
1225A		G	22 (7 × 30)	20	.820	32	58
1221A		G	22 (7 × 30)	28	.975	32	58
1226A		G	22 (7 × 30)	32	1.025	32	58

* Capacitance between conductors. † Capacitance between one conductor and shield.

Not authorized at all locations. Please call for complete information.

MULTICONDUCTOR OVERALL BELDFOIL™ SHIELDED CABLES— SOUND, BROADCAST, AUDIO, AND INSTRUMENTATION



Variety of gauges, insulations, shieldings, and jackets to meet every service requirement. 100% shield coverage. **Type 8640:** Solid copper, Geosol™ insulated (solderable without stripping), twisted pair. Beldfoil® aluminum-polyester shield, 30 AWG solid tinned copper covered steel drain wire, white PVC jacket. **Type 8641:** Tinned copper, polyethylene insulated, twisted pair, Beldfoil® shield, 24 AWG stranded copper drain wire, PVC jacket. **Types 8761, 9461, and 8771:** Same, except 22 AWG drain wire. **Types 8762, 9464, 8772, 8760, 9460, and 8770:** Same, except 20 AWG drain wire. **Types 8719 and 8618:** Same, except 18 AWG drain wire. **Type 8720:** Same, except 16 AWG drain wire. **Type 8718:** Same, except 14 AWG drain wire. **Types 9533 thru 9546:** Tinned copper, PVC insulated, conductors cabled, Beldfoil® shield, 24 AWG drain wire, PVC jacket. **Types 9462 and 9154:** Same, except 22 AWG drain wire. **Type 9418:** Same, except 20 AWG drain wire. **Type 9452:** Tinned copper, polypropylene insulated, twisted pair, noise reducing tape; 24 AWG drain wire, Beldfoil® shield, PVC jacket. **Types 8450, 8451, 9451, and 9770:** Same, except no noise reducing tape and 22 AWG drain wire. **Type 8729:** Tinned copper polyethylene insulated, conductors cabled, Beldfoil® shield, three 23 AWG solid tinned copper coated steel and one 25 AWG stranded tinned copper coated steel drain wires, PVC jacket.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Conds.	Nom. O.D. (In.)	Cap.* pF
8640	.....	A	28(Solid)	2	.090	55
8641	CM	B	24(7 × 32)	2	.168	22
9533	CM	C	24(7 × 32)	3	.168	30
9534	CM	C	24(7 × 32)	4	.190	30
9535	CM	C	24(7 × 32)	5	.195	30
9536	CM	C	24(7 × 32)	6	.215	30
9537	CM	C	24(7 × 32)	7	.215	30
9538	CM	C	24(7 × 32)	8	.230	30
9539	CM	C	24(7 × 32)	9	.250	30
9540	CM	C	24(7 × 32)	10	.250	30
9541	CM	C	24(7 × 32)	15	.290	30
9542	CM	C	24(7 × 32)	20	.320	30
9543	CM	C	24(7 × 32)	25	.360	30
9544	CM	C	24(7 × 32)	30	.380	30
9545	CM	C	24(7 × 32)	40	.430	30
9546	CM	C	24(7 × 32)	50	.490	30
9452	.....	D	24(19 × 36)	2	.135	30
8450	.....	B	22(Solid)	2	.118	40
8451	CM	B	22(7 × 30)	2	.135	34
8761	CM	B	22(7 × 30)	2	.175	24
9451	CM	E	22(7 × 30)	2	.135	34
9462	CM	B	22(7 × 30)	2	.178	50
9461	CM	E	22(7 × 30)	2	.180	24
9770	CM	F	22(7 × 30)	3	.145	32
8771	CM	F	22(7 × 30)	3	.183	23
8729	CL3	G	22(19 × 34)	4	.265	22
8762	CM	B	20(7 × 28)	2	.204	27
9464	CM	E	20(7 × 28)	2	.204	27
9154	CM	B	20(7 × 28)	2	.198	60
8772	CM	B	20(7 × 28)	3	.208	27
8760	CM	B	18(16 × 30)	2	.222	27
9460	CM	E	18(16 × 30)	2	.222	27
8770	CM	B	18(16 × 30)	3	.236	24
9418	CM	B	18(16 × 30)	4	.245	60
8719	CL2	B	16(19 × 29)	2	.304	24
8618	CL3	B	16(19 × 29)	3	.318	26
8720	CL2	B	14(19 × 27)	2	.340	24
8718	CL2	B	12(19 × 25)	2	.400	25

*Capacitance between conductors.

MULTIPAIRED OVERALL BELDFOIL SHIELDED INSTRUMENTATION, COMPUTER, AND P.O.S. CABLES

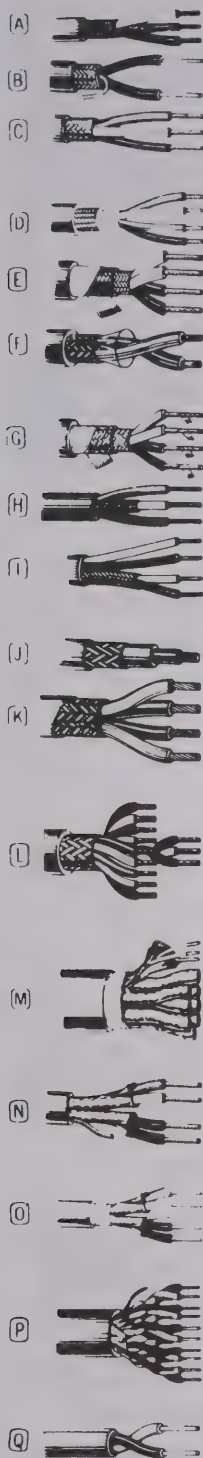
Type 8752: Tinned copper, polypropylene insulated, twisted pairs; Beldfoil® aluminum-polyester shield, stranded drain wire, chrome PVC jacket. **All Other Types:** Tinned copper, PVC insulated, twisted pairs, overall Beldfoil® shield, stranded tinned copper drain wire, chrome PVC jacket.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Pairs	Nom. O.D. (In.)	Cap.* pF	Cap.† pF
9501	CM	H	24(7 × 32)	1	.156	41	75
9502	CM	H	24(7 × 32)	2	.222	30	50
9503	CM	H	24(7 × 32)	3	.232	30	50
9504	CM	H	24(7 × 32)	4	.265	30	50
9505	CM	H	24(7 × 32)	5	.295	30	50
9506	CM	H	24(7 × 32)	6	.295	30	50
9507	CM	H	24(7 × 32)	7	.300	30	50
9508	CM	H	24(7 × 32)	8	.330	30	50
9509	CM	H	24(7 × 32)	9	.340	30	50
9510	CM	H	24(7 × 32)	10	.380	30	50
9515	CM	H	24(7 × 32)	15	.425	30	50
9519	CM	H	24(7 × 32)	19	.460	30	50
9525	CM	H	24(7 × 32)	25	.515	30	50
9550	CM	H	24(7 × 32)	50	.700	30	50
9302	CM	H	22(Solid)	2	.244	35	50
9305	CM	H	22(Solid)	4	.265	35	50
9306	CM	H	22(Solid)	6	.321	35	50
9309	CM	H	22(Solid)	9	.373	35	50
9315	CM	H	22(Solid)	15	.480	35	50
9319	CM	H	22(Solid)	19	.495	35	50
9327	CM	H	22(Solid)	27	.615	35	50
8752	.....	I	22(Solid)	38	.610	.....	.....
8751	CM	I	22(Solid)	51	.710	.....	.....

*Capacitance between conductors. †Capacitance between one conductor and other conductors connected to shield.

**Not authorized at all locations. Please call for
complete information.**

COMMUNICATION AND INSTRUMENTATION CABLES



Type 8643: Tinned copper, polypropylene insulated, conductors cabled around textile strength member, tinned copper braid shield, paper separator, PVC jacket. **Type 8732:** Tinned copper, polyethylene insulated, conductors cabled, tinned copper braid shield, PVC jacket. **Type 8404:** Same, except rayon braid under shield. **Type 8424:** Tinned copper, rubber installed, conductors cabled, rayon braid, tinned copper braid shield, cotton wrap, black rubber jacket. **Type 8208:** Tinned copper, rubber insulated, twisted pair, separator, braided tinned copper shield, chrome PVC jacket. **Type 8407:** Tinned copper, separator, rubber insulated, conductors cabled, rayon braid, tinned copper braid shield, cotton wrap, black neoprene jacket. **Types 8437 and 8441:** Tinned copper, PVC insulated, twisted pair, 22 AWG drain wire, tinned copper braid shield, black PVC jacket. **Types 8735, 8734, 9260, and 9261:** Tinned copper, PVC insulated, conductors cabled, tinned copper braid shield, PVC jacket. **Types 9951 thru 9968:** Stranded tinned copper, PVC insulated, clear nylon jacket, tinned copper braid shield, white PVC jacket.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Conds.	Nom. O.D. (In.)	Cap.,* pF
8643		A	30(7 × 38)	3	.096	25
8437	CM	B	22(Solid)	2	.200	48
8735	CM	C	22(7 × 30)	3	.199	34
8441	CM	B	22(7 × 30)	2	.210	49
8404		D	20(26 × 34)	4	.254	23
8424		E	20(26 × 34)	4	.295	35
8208		F	18(16 × 30)	2	.225	46
8407		G	16(65 × 34)	4	.416	30
8734	CM	H	22(7 × 30)	3#	.194	
8732	CM	I	22(7 × 30)	4†		21
9965		J	22(19 × 34)	1	.100	
9966		J	22(19 × 34)	2	.176	51
9967		K	22(19 × 34)	3	.184	45
9968		J	22(19 × 34)	4	.200	42
9961		J	20(19 × 32)	1	.109	
9962		J	20(19 × 32)	2	.192	53
9963		J	20(19 × 32)	3	.202	49
9964		K	20(19 × 32)	4	.212	40
9951		J	16(19 × 29)	1	.139	
9952		J	16(19 × 29)	2	.238	57
9953		J	16(19 × 29)	3	.250	58
9954		J	16(19 × 29)	4	.270	49
9260	CM	L	20(7 × 28)	6	.305	35
9261	CM	L	20(7 × 28)	12	.410	35

*Capacitance between conductors. #One shielded, two unshielded. †Two shielded, two unshielded. §MIL-W-16878 1 Type B.

INDIVIDUALLY SHIELDED PAIRED AUDIO, CONTROL, AND DATA CABLES

Types 8764 thru 8768 and 9402: Tinned copper, PVC insulated, twisted pairs, each pair and its drain wire under Beldfoil® shield, overall chrome PVC jacket. **Type 8723:** Tinned copper, polypropylene insulated, each under a Beldfoil® shield, common drain wire, chrome PVC jacket. **All Others:** Tinned copper, polypropylene insulated, twisted pairs, each pair and its stranded tinned copper drain wire under Beldfoil® shield, chrome PVC jacket.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Pairs	Nom. O.D. (In.)	Cap.,* pF	Cap.,† pF
8767	MP/CM	M	22(Solid)	3	.279	40	77
8768	MP/CM	M	22(Solid)	6	.379	40	77
8764	MP/CM	M	22(Solid)	9	.425	40	77
8765	MP/CM	M	22(Solid)	11	.470	40	77
8766	MP/CM	M	22(Solid)	15	.525	40	77
8723	CM	N	22(7 × 30)	2	.165	35	62
8777	CM	M	22(7 × 30)	3	.301	30	55
8778	CM	M	22(7 × 30)	6	.401	30	55
8774	CM	M	22(7 × 30)	9	.443	30	55
8775	CM	M	22(7 × 30)	11	.486	30	55
8768	MP/CM	M	22(7 × 30)	12	.486	30	55
8776	CM	M	22(7 × 30)	15	.580	30	55
8769	CM	M	22(7 × 30)	19	.625	30	55
8773	CM	M	22(7 × 30)	27	.745	30	55
9767	CM	M	22(7 × 30)	37	.850	30	55
9402	CM	O	20(7 × 28)	2	.300	55	95
9873	CM	M	20(10 × 30)	3	.356	30	55
9874	CM	M	20(10 × 30)	6	.471	30	55
9875	CM	M	20(10 × 30)	9	.555	30	55
9876	CM	M	20(10 × 30)	11	.580	30	55
9877	CM	M	20(10 × 30)	12	.600	30	55
9879	CM	M	20(10 × 30)	15	.655	30	55
9773	CM	M	18(16 × 30)	3	.398	30	55
9774	CM	M	18(16 × 30)	6	.570	30	55
9775	CM	M	18(16 × 30)	9	.655	30	55
9776	CM	M	18(16 × 30)	12	.750	30	55
9777	CM	M	18(16 × 30)	15	.820	30	55

*Capacitance between conductors. †Capacitance between one conductor and shield.

TELEPHONE CABLES

Types 9562 thru 9585: Tinned copper PVC insulated, conductors cabled, chrome PVC jacket. **All Others:** Bare copper, polyethylene insulated, conductors cabled, rose gray PVC jacket.

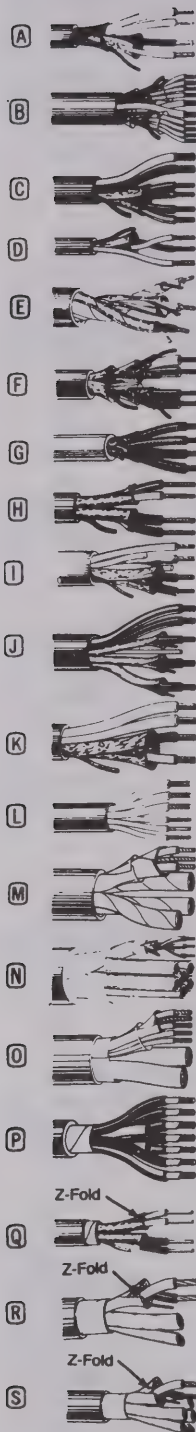
Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Pairs	Insul. Thckns. (In.)	Jacket Thckns. (In.)	Nom. O.D. (In.)
9562	CM	P	24(Solid)	2	.010	.032	.199
9566	MP/CM	P	24(Solid)	6	.010	.032	.289
9570	MP/CM	P	24(Solid)	10	.010	.035	.310
9585	MP/CM	P	24(Solid)	25	.010	.040	.480
8795	CM	Q	22(Solid)	2#	.016	.022	.160
8794	CM	Q	22(Solid)	3#	.016	.022	.168
9794	MP/CM	Q	22(Solid)	4#	.016	.025	.190

#Number of conductors.

Not authorized at all locations. Please call for complete information.

SPECIAL AUDIO, COMMUNICATION, AND INSTRUMENTATION CABLES

Type 8434: Tinned copper, polyethylene insulated, one pair under Beldfoil[®] shield with stranded drain wire, overall Beldfoil[®] shield, chrome PVC jacket; **Type 8787:** Tinned copper, 22 AWG conductors PVC insulated, 24 AWG conductors polyethylene insulated, cabled in two quads, each with tape wrap, stranded drain wire, Beldfoil[®] shield over each quad. 2 quads and 2 unshielded conductors cabled, chrome PVC jacket; **Type 8786:** Tinned copper, PVC insulated, 4 conductors cabled under Beldfoil[®] shield, 2 conductors unshielded, stranded, drain wire, chrome PVC jacket; **Type 9685:** Tinned copper, PVC insulated, 1 pair under Beldfoil[®] shield with stranded drain wire, chrome PVC jacket; **Type 8733:** Tinned copper, polyethylene insulated, each separate conductor under Beldfoil[®] shield with Tinned cadmium bronze ribbon as drain wire, chrome PVC jacket; **Type 8728:** Tinned copper, polypropylene insulated, twisted pairs each under Beldfoil[®] shield with stranded drain wire, overall common Beldfoil[®] shield with stranded drain wire, chrome PVC jacket; **Type 8729:** Tinned copper, polyethylene insulated, conductors cabled, Beldfoil[®] shield, 3-23 AWG solid Tinned copper coated steel and 1-25 AWG stranded Tinned copper coated steel drain wire, white PVC jacket; **Type 8723:** Tinned copper, polypropylene insulated twisted pairs each under Beldfoil[®] shield, stranded common drain wire, chrome PVC jacket; **Types 8730 and 8724:** Tinned copper, polypropylene insulated, Beldfoil[®] shield over one pair with stranded drain wire, chrome PVC jacket; **Type 8788:** Tinned copper, PVC insulated, three conductors each separately Beldfoil[®] shielded, drain wire for each conductor is Tinned cadmium bronze ribbon, 2 conductors unshielded, chrome PVC jacket; **Type 8763:** Tinned copper, polyethylene insulated, 2 conductors under Beldfoil[®] shield with stranded drain wire, chrome PVC jacket; **Type 8722:** Tinned copper, PVC insulated, 2 conductors under Beldfoil[®] shield with stranded drain wire, PVC jacket; **Type 9686:** Tinned copper, PVC insulated, PVC jacket; **Type 9155:** Tinned copper, polyethylene insulated, 2 conductors under Beldfoil[®] shield with stranded drain wire beige PVC jacket; **Type 9784:** Tinned copper, foam polypropylene insulated, each pair individually Beldfoil[®] shielded with stranded drain wire, chrome PVC jacket; **Type 8725:** Tinned copper, polypropylene insulated, four groups of two conductors with stranded drain wire, each group individually Beldfoil[®] shielded with polyester tape wrap, chrome PVC jacket;



Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Conds.	Nom. O.D. (In.)	Cap.,† pF	Cap.,‡ pF
8434	.....	A	25 (7 × 33)*	2●	.165	25	40
8787	.....	B	25 (7 × 33)* 24 (7 × 32) 22 (7 × 30)	8● 2▲	.290	.....	.....
8786	.....	C	24 (7 × 32) 22 (7 × 30)	4● 2▲	.236	.....	.....
9685	CM	D	22 (7 × 30) 22 (7 × 30)	2● 1▲	.199	60	99
8733	.....	E	22 (7 × 30)	3●	.205	.....	.....
8728	CM	F	22 (7 × 30)	4● ■	.206	35	62
8729	CL3	G	22 (19 × 33)	4●	.265	22	42
8723	CM	H	22 (7 × 30)	4● ■	.165	35	62
8730	.....	I	22 (7 × 30) 22 (7 × 30)	2● 2▲	.205	34	67
8724	.....	I	22 (7 × 30) 22 (7 × 30)	2● 2▲	.165	34	67
8788	.....	J	22 (7 × 30) 22 (7 × 30)	3● 2▲	.236	.....	125
8763	.....	D	20 (7 × 28) 20 (7 × 28)	2● 1▲	.210	26	48
8722	.....	K	20 (7 × 28) 20 (7 × 28)	2● 2▲	.226	60	99
9686	CM	L	20 (10 × 30) 16 (26 × 30)	3▲ 3▲	.295	.....	.....
9155	CM	L	20 (7 × 28) 18 (16 × 30)	2● 2▲	.256	22	40
9784	.....	M	24 (7 × 32)	12● ■	.454	11	22
8725	.....	M	20 (7 × 28)	8● ■	.345	27	49
9771	.....	N	22 (7 × 30)	21● §	.550	32	60
9772	.....	N	22 (7 × 30)	36● §	.725	32	60
8726	.....	O	22 (7 × 30)	12● ◆	.330	34	67
8727	.....	O	22 (7 × 30)	28● ◆	.435	34	67

*Three strands of tinned copper and four strands of tinned copper coated steel. ●Shielded. ▲Unshielded. ■Cabled in pairs. §Cabled in triplets. ◆Cabled in quads. †Capacitance between conductors. ‡Capacitance between one conductor and other conductors connected to shield.

RUBBER AND NEOPRENE SO ELECTRICAL POWER AND CONTROL CABLE

Bare copper, rubber insulated, conductors cabled with fillers, black neoprene jacket.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Conds.	Insul. Thick. (In.)	Jacket Thick. (In.)	Nom. O.D. (In.)
9420		P	16 (65 × 34)	5	.033	.080	.520
9422		P	16 (65 × 34)	7	.033	.080	.600
9424		P	16 (65 × 34)	9	.033	.100	.720
9425		P	16 (65 × 34)	12	.033	.100	.730
9427		P	16 (65 × 34)	16	.033	.100	.825
9429		P	16 (65 × 34)	20	.033	.100	.880

NON-CONDUIT PLENUM, PAIRED CABLES, INDIVIDUALLY SHIELDED FLUOROCOPOLYMER JACKETED COMPUTER AND INSTRUMENTATION CABLES

Tinned copper, Teflon[®] insulated, twisted pairs, each pair individually shielded with Beldfoil[®] aluminum-polyester shield with drain wire, overall tape wrap, red fluorocopolymer jacket.

Belden Number	NEC Type	Fig.	AWG Stranding	No. of Pairs	Nominal		Nom. O.D. (In.)
					Cap.,† pF/Ft.	Cap.,‡ pF/Ft.	
87723	CMP	Q	22 (7 × 30)	2	31	59	.174
87777	CMP	R	22 (7 × 30)	3	31	59	.241
87778	CMP	S	22 (7 × 30)	6	31	59	.306

†Capacitance between conductors. ‡Capacitance between one conductor and other conductors connected to shield.

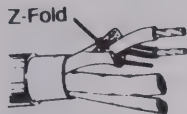
Not authorized at all locations. Please call for complete information.

LOW CAPACITY DATA CABLES

Tinned copper conductors, foamed Teflon[®] insulation, twisted pairs individually shielded. Beldfoil[®] aluminum-polyester shield with drain wire, overall Teflon[®] jacket.

Belden Number	NEC Type	Fig.	No. of Pairs	Conductors AWG/Strand	Nom. Imp. Ohms	Vel. of Prop. %	Nom. Cap.* pF Ft.
89182	CL2P	A	1	22 (19 × 34)	150	78	8.8
89729	CMP	A	2	24 (7 × 32)	100	78	12.5
89730	CMP	A	3	24 (7 × 32)	100	78	12.5
89728	CMP	A	4	24 (7 × 32)	100	78	12.5

*Capacitance between conductors.



A

CONTROL AND INSTRUMENTATION CABLES

Tinned copper stranded conductors. Teflon[®] insulation, conductors cabled, overall Beldfoil[®] aluminum-polyester shield with tinned copper braid shield, red Teflon[®] jacket.

Belden Number	NEC Type	Fig.	No. of Pairs	Conductors AWG/Strand	Nom. Cap.* pF/Ft.	Nom. O.D. (In.)
83503	CMP	B	3	24 (19 × 36)	21	.168
83504	CMP	B	4	24 (19 × 36)	20	.179
83506	CMP	B	6	24 (19 × 36)	18	.206
83509	CMP	B	9	24 (19 × 36)	18	.233
83512	CMP	B	12	24 (19 × 36)	18	.256
83515	CMP	B	15	24 (19 × 36)	18	.280
83552	CMP	B	2	22 (19 × 34)	24	.174
83553	CMP	B	3	22 (19 × 34)	23	.181
83554	CMP	B	4	22 (19 × 34)	22	.194
83556	CMP	B	6	22 (19 × 34)	20	.224
83559	CMP	B	9	22 (19 × 34)	20	.255
83562	CMP	B	12	22 (19 × 34)	20	.281
83569	CMP	B	19	22 (19 × 34)	20	.324
83602	CMP	B	2	20 (19 × 32)	27	.190
83604	CMP	B	4	20 (19 × 32)	22	.213
83606	CMP	B	6	20 (19 × 32)	21	.248
83609	CMP	B	9	20 (19 × 32)	21	.283
83612	CMP	B	12	20 (19 × 32)	21	.314
83652	CMP	B	2	18 (19 × 30)	30	.208
83653	CMP	B	3	18 (19 × 30)	27	.218
83654	CMP	B	4	18 (19 × 30)	26	.234
83656	CMP	B	6	18 (19 × 30)	25	.275
83659	CMP	B	9	18 (19 × 30)	25	.316
83662	CMP	B	12	18 (19 × 30)	25	.372
83702	CMP	B	2	16 (19 × 29)	33	.220
83703	CMP	B	3	16 (19 × 29)	31	.230
83704	CMP	B	4	16 (19 × 29)	30	.249
83706	CMP	B	6	16 (19 × 29)	27	.293
83709	CMP	B	9	16 (19 × 29)	27	.338
83712	CMP	B	12	16 (19 × 29)	27	.396
83715	CMP	B	15	16 (19 × 29)	27	.437
83719	CMP	B	19	16 (19 × 29)	27	.459
83752	FPLP	B	2	14 (7 × 22)	29	.316
83753	FPLP	B	3	14 (7 × 22)	27	.336
83754	FPLP	B	4	14 (7 × 22)	25	.363
83756	FPLP	B	6	14 (7 × 22)	24	.446
83802	FPLP	B	2	12 (7 × 20)	32	.357
83803	FPLP	B	3	12 (7 × 20)	30	.375
83804	FPLP	B	4	12 (7 × 20)	29	.426
83806	FPLP	B	6	12 (7 × 20)	27	.500

*Capacitance between conductors.



B



C



D



E

NON-CONDUIT PLENUM CABLES FLUOROCOPOLYMER (PVDF) JACKETED SOUND AND CONTROL CABLES

Tinned copper. Teflon insulated, twisted pair, overall tape wrap, red fluorocopolymer jacket.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Pairs	Insul. Thick. (In.)	Jacket Thick. (In.)	Nom. O.D. (In.)
87740	CMP	C	18 (19 × 30)	1	.010	.022	.180



F

PAIRED CABLES OVERALL BELDFOIL[®] SHIELD SOUND, BROADCAST, AND INSTRUMENTATION

Tinned copper, Teflon[®] insulated, twisted pair. Beldfoil[®] aluminum-polyester shield and drain wire, red fluorocopolymer jacket.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Pairs	Insul. Thick. (In.)	Jacket Thick. (In.)	Nom. O.D. (In.)
87761	CMP	D	22 (7 × 30)	1	.010	.022	.152
87760	CMP	E	18 (19 × 30)	1	.010	.022	.183



G

COAXIAL BROADCAST CABLES

Belden Number	NEC Type	Fig.	AWG and Stranding	Nom. Imp.	Vel. of Prop.	Insul. Mat'l.	Jacket Mat'l.
9850		F	TC 18 (7 × 26)	75	66%	PE	PVC
9861		G	SCC 15 (Solid)	50	66%	PE	PVC

Not authorized at all locations. Please call for complete information.

BRAIDED TINNED COPPER SHIELDING AND BONDING CABLES (FIG. A)

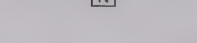
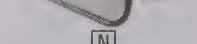
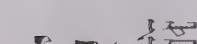
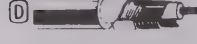
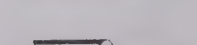


Belden Number	Stranding	Nom. I.D. (In.)	Belden Number	Stranding	Nom. I.D. (In.)
8660	96 × 34	1/8	8660	336 × 34	1/2
8668	120 × 34	11/64	8662	576 × 34	25/32
8663	168 × 34	7/32	8670	480 × 30	3/4†

† Flat width.



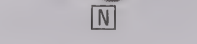
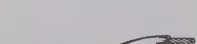
MICROPHONE CABLES



Type 1192A: Bare copper, polyethylene insulated, conductors cabled, tinned copper braid shield, matte PVC jacket. **Type 8410:** 3 strands copper and 4 strands tinned copper-covered steel, rayon braid, rubber insulation, rayon braid, tinned copper braid shield, cotton yarn wrap, black rubber jacket, 52 ohms impedance. **Type 8413:** Tinned cadmium bronze conductors, cotton serve, rubber insulation, cabled with fillers, conductive textile wrap shield, tinned copper braid shield cotton spiral, EPDM jacket. **Types 8406 and 9399:** Bare cadmium copper conductors, cotton serve, rubber insulation, cabled with fillers, conductive textile wrap shield, tinned copper braid shield, cotton spiral, brown rubber jacket. **Types 9394, 9778, and 9395:** Tinned copper conductor, rubber insulation conductive textile shield, tinned copper spiral shield, paper tape, black Neoprene jacket. **Types 8412, 8402, 8423, 8424, 8425, 8426, 8427, 8418, and 8428:** Tinned copper conductors, cotton wrap, rubber insulation, conductors cabled rayon braid, tinned copper braid shield, cotton wrap, overall jacket. **Types 8408 and 8407:** Tinned copper conductors, paper wrap, rubber insulation conductors cabled, rayon braid, tinned copper braid shield, cotton wrap, Neoprene jacket. **Types 8411 and 8401:** 3 strands tinned copper and 4 strands tinned copper-covered steel; braided textile, polyethylene insulation, tinned copper braided shield, PVC jacket. **Types 9396:** Same, except PVC insulation. **Type 8420:** Tinned cadmium bronze conductors, polyethylene insulation, cabled with fillers, rayon braid, tinned copper braid shield, PVC jacket. **Types 9397 and 9398:** Bare copper, PVC insulation, cabled with fillers, bare copper spiral shield, PVC jacket. **Type 9452:** Tinned copper conductors; polypropylene insulation, twisted pair, noise reducing tape. Beldfoil shield with drain wire, PVC jacket. **Type 8422:** Tinned copper conductors, polyethylene insulation, cabled, cotton braid, tinned copper braid shield, PVC jacket. **Types 8403, 8404, and 8405:** Same, except rayon braid instead of cotton.

Belden Number	Fig.	No. of Conds.	AWG and Stranding	Nom. O.D. (In.)
1192A	E	4	24(42 × 40)	.245
8410	B	1	25(7 × 33)	.245
8413	C	2	24(45 × 40)	.200
8406	C	3	24(45 × 40)	.223
9399	C	2	24(45 × 40)	.195
9394	D	1	20(26 × 34)	.190
9778	D	1	20(25 × 34)	.235
8412	E	2	20(26 × 34)	.263
8402	E	2	20(26 × 34)	.263
8423	E	3	20(26 × 34)	.272
8424	E	4	20(26 × 34)	.295
8425	E	5	20(26 × 34)	.318
8426	E	6	20(26 × 34)	.344
8427	E	7	20(26 × 34)	.355
8418	E	8	20(26 × 34)	.381
9395	D	1	18(41 × 34)	.235
8428	F	2	18(41 × 34)	.290
8408	E	2	16(65 × 34)	.380
8407	E	4	16(65 × 34)	.416
8411	G	1	25(7 × 33)	.144
8401	G	1	25(7 × 33)	.199
9396	H	1	25(7 × 33)	.100
8420	J	2	24(45 × 40)	.185
9397	K	2	24(105 × 44)	.176
9398	K	3	24(105 × 44)	.185
9452	L	2	24(19 × 36)	.135
8422	J	2	22(16 × 34)	.231
8403	M	3	20(26 × 34)	.244
8404	M	4	20(26 × 34)	.254
8405	M	5	20(26 × 34)	.281

MAGNET WIRE (FIG. N)



Beldsol® is a dual firm wire combining the excellent dielectric characteristics of polyurethane and the toughness and solvent resistance offered by an overcoat of nylon. Will solder at 750°F without insulation removal. Heavy armored Poly-Thermaleze has a base coat of polyester and a top coat of anide-imide polymer, rated for use to 180°C, and able to resist solvents and abuse.

Size	Single Beldsol		Heavy Poly-Thermaleze	
	1/2 lb. Spool		1 lb. Spool	
	Belden Number	Length (Ft.)	Belden Number	Length (Ft.)
14	.....	.....	8073	80
16	.....	.....	8074	126
18	8049	100	8075	126
20	8050	160	8076	315
22	8051	254	8077	501
24	8052	404	8078	793
26	8053	645	8079	1260
28	8054	1020	8080	1990
30	8055	1615	8081	3140
32	8056	2515	.....	.....
34	8057	4060	8083	7860
36	8058	6400	.....	.....
38	.....	.....	8085	19400

Not authorized at all locations. Please call for complete information.

NON-CONDUIT PLENUM CABLES

Belden Number	NEC Type	Fig.	MIL No. RG-	Nom. Imp., Ohms	Vel. of Prop. %	Nom. Cap., pF/Ft.	Center Conductor		Shield Mat'l.*	Jacket	
							Mat'l.*	AWG/Strand		Mat'l.	O.D. (In.)

COAXIAL COMPUTER INSTRUMENTATION PLENUM CABLES

88240	CMP	A	58 U	50	69.5	27	BC	20 (Solid)	TC	TEF	.178
89880	CL2P	B	.....	50	80	26	BC	.0085 (Solid)	§	TEF	.375
88241	CMP	A	59 U	75	69.5	19.7	BCS	22 (Solid)	BC	TEF	.206
89259	CMP	D	59 U	75	84	16	BC	22 (7 × 30)	BC	TEF	.202
89120	CMP	C	6	75	78	17	BC	18 (Solid)	TC†	TEF	.253
89292	CL2P	C	11 U	75	80	16	BC	14 (Solid)	TC†	TEF	.375
88281	CMP	E	.....	75	69.5	19	BC	20 (Solid)	TC‡	TEF	.304
89555	CL2P	F	59 U	75	69.5	19.5	BCS	23 (Solid)	BC	TEF	.230 × .435
88232	CMP	B	59 U	75	78	17.3	BCS	20 (Solid)	BC‡	TEF	.264
89269	CMP	G	62A U	93	85	12.8	BCS	22 (Solid)	BC	TEF	.218
86262	CL2P	A	62 U	.....	85	12.5	BCS	22 (Solid)	BC	TEF	.225
82240	CMP	A	58U	53.5	69.5	28.5	BC	20 (Solid)	TC	TEF	.165
82241	CMP	A	59U	75	84	16.3	BCS	20 (Solid)	BC	TEF	.202
82108	CMP	C	59U	75	84	16.3	BCS	20 (Solid)	§	TEF	.216
82259	CMP	A	59U	75	78	17.8	BC	22 (7 × 30)	BC	TEF	.198
1151A	CMP	S	59U	75	82	16.5	BCS	20 (Solid)	TC†	TEF	.240
89907	CMP	C	11U	50	80	25.4	TC	20 (19 × 32)	TC†	TEF	.171
1152	.....	S	6U	75	82	16.5	BCS	18 (Solid)	§	TEF	.277
82120	CMP	C	6U	75	82	16.5	BCS	18 (Solid)	TC†	TEF	.236
1153A	CL2P	S	11U	75	82	16.5	BCS	14 (Solid)	TC†	TEF	.387
82269	CMP	G	62U	93	85	12.5	BCS	22 (Solid)	BC	TEF	.208
82262	CMP	A	62U	93	85	12.5	BCS	22 (Solid)	BC	TEF	.208
89248	CMP	C	6U	75	82	16.5	BC	18 (Solid)	TC†	TEF	.232
82248	CMP	C	6U	75	82	16.5	BC	18 (Solid)	TC†	TEF	.232

TWINAXIAL COMPUTER INSTRUMENTATION PLENUM CABLES

89272	CMP	H	.....	78	71	16.9	TC	20 (7 × 28)	TC	TEF	.204
89207	CMP	I	.....	100	69.5	13	TC,BC	20 (7 × 28)	TC	TEF	.267
89855	CMP	J	.....	100	69.5	15.5	TC	22 (Solid)	TC	TEF	.264
89696	CMP	J	.....	100	69.5	15.0	TC	22 (Solid)	TC	TEF	.264

Belden Number	NEC Type	Fig.	No. of Conds.	Conductors AWG/Strand	Shield Mat'l.*	Nom. Cap., pF/Ft.	Jacket O.D. (In.)
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MULTICONDUCTOR PLENUM CABLES

87760	CMP	L	2	20 (19 × 32)	BF	33	
88442	CMP	K	2	22 (7 × 30)	None		.147
89740	CMP	K	2	18 (19 × 30)	None	.....	.180
88641	CMP	L	2	24 (7 × 32)	BF	27	.135
88761	CMP	L	2	22 (7 × 30)	BF	25	.150
88760	CMP	L	2	18 (19 × 30)	BF	33	.184
88444	CMP	M	4	22 (7 × 30)	None	.....	.167
88489	CMP	M	4	18 (19 × 30)	None	.....	.207
89418	CMP	N	4	18 (19 × 30)	BF	27	.212

MULTI-PAIRED PLENUM CABLES

88723	CMP	O	2	22 (7 × 30)	BF	31	.174
88777	CMP	P	3	22 (7 × 30)	BF	31	.252
88778	CMP	P	3	22 (7 × 30)	BF	31	.306
89503	CMP	Q	3	24 (7 × 32)	BF	20	.216
89504	CMP	Q	4	24 (7 × 32)	BF	20	.235
89505	CMP	Q	5	24 (7 × 32)	BF	20	.261
88741	CMP	R	2	22 (7 × 30)	None	.....	.219
88757	CMP	R	4	22 (7 × 30)	None	.....	.254
89901	CMP	P	8	20 (19 × 32)	TC	17.5	.....

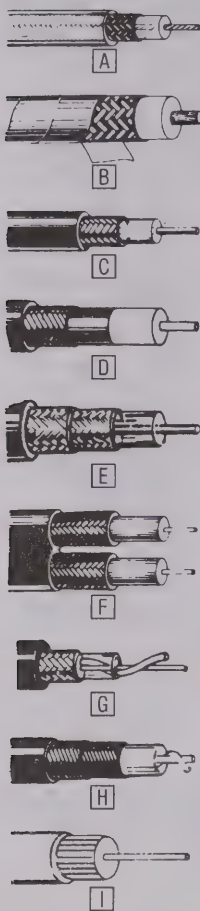
*BC = Bare copper; BCS = Bare copper-coated steel; TC = Tin-coated copper; BF = Beldfoil®; TEF = Teflon®. §Aluminum-polyester shield plus tinned copper braid plus Duofoil plus tinned copper braid. †Plus Duofoil. ‡Plus a second identical shield.

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.

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COAXIAL CABLES

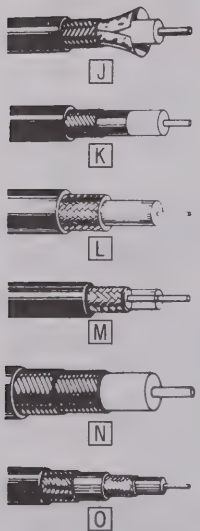
Abbreviations used: BC—bare copper; TC—tinned copper; FEP—fluorinated ethylene propylene (Teflon[®]); TFE—tetrafluoroethylene (Teflon[®]); PVC—polyvinylchloride plastic; FBG—fiberglass; PE—polyethylene plastic; SCC—silver coated copper braid; SCS—silver coated copper covered steel; BCS—bare copper covered steel; CCS—copper-coated steel; DF—Duofoil[™]; DB—Duobond[™].



Belden No.	NEC Type	Fig.	MIL No. RG-	Nom. Imp. Ohms	Vel. of Prop. %	Nom. Cap. pF Ft.	Center Conductor		Shield	Jacket	
							Mat'l.	AWG/Strands		Mat'l.	O.D. (In.)
83265	.....	A	178B U	50	69.5	29	SCS	30(7 × 38)	SCC	FEP	.070
8216	.....	C	174/U	50	66	30.8	BCS	26(7 × 34)	TC	PVC	.101
83284	.....	A	316/U	50	69.5	29	SCS	26(7 × .0067)	SCS	FEP	.098
9252	.....	C	122/U	50	66	30.8	TC	22(27 × 36)	TC	PVC	.160
8240	CL2X	C	58/U	53.5	66	28.5	BC	20(Solid)	TC	PVC	.195
9201	.....	C	58/U	53	66	28.5	BC	20(Solid)	BC	PVC	.195
9310	.....	D	58/U	53.5	66	28.5	BC	20(Solid)	TC†	PVC	.195
8259	.....	C	58A/U	50	66	30.8	TC	20(19 × .0071)	TC	PVC	.195
8262	.....	C	58	50	66	30.8	TC	20(19 × .0071)	TC	PVC	.195
9203	.....	C	58	50	66	30.8	TC	20(19 × .0071)	TC	PVC	.195
8219	CL2	C	58A/U	50	78	26	TC	20(19 × 32)	TC	PVC	.195
9311	CL2	D	58A/U	50	78	26	TC	20(19 × 32)	TC†	PVC	.195
9273	CL2X	E	223/U	50	66	30.8	SCC	19(Solid)	SCC†	PVC	.212
83241	.....	B	141A/U	50	69.5	29	SCS	19(Solid)	SCC	FBG	.190
83242	.....	E	142B/U	50	69.5	29	SCS	18(Solid)	SCC†	FEP	.195
9258	CL2	A	8/X	50	78	26	BC	16(19 × 29)	BC	PVC	.242
8237	CL2	A	8/U	52	66	29.5	BC	13(7 × 21)	BC	PVC	.405
9251	CL2X	A	8A/U	52	66	29.5	BC	13(7 × 21)	BC	PVC	.405
8242	CL2X	E	9/U	51	66	30	SCC	13(7 × 21)	BC†	PVC	.420
8267	CL2X	A	213/U	50	66	30.8	BC	13(7 × 21)	BC	PVC	.405
8268	CL2X	E	214/U	50	66	30.8	SCC	13(7 × .0296)	SCC†	PVC	.425
8214	CL2	A	8/U	50	78	26	BC	11(7 × 19)	BC	PVC	.405
83264	.....	A	179B/U	75	69.5	19.5	SCS	30(7 × 38)	SCC	FEP	.100
83267	.....	B	187A/U	75	69.5	19.5	SCS	30(7 × 38)	SCC	TFE	.105
8263	CL2X	C	59B/U	75	66	20.5	BCS	.023(Solid)	BC	PVC	.242
9204	.....	C	59	75	66	20.5	BCS	.023(Solid)	BC	PVC	.242
9555	CL2	F	59/U	75	66	20.5	BCS	.023(Solid)	BC	PVC	.242 × .485
9659	CL2X	C	59/U	75	78	17.3	BC	22(7 × 30)	BC	PVC	.242
8238	CL2	C	11/U	75	66	20.5	TC	18(7 × 26)	BC	PVC	.405
8261	.....	C	11A/U	75	66	20.5	TC	18(7 × 26)	BC	PVC	.405
9212	.....	C	11A/U	75	66	20.5	TC	18(7 × 26)	BC	PVC	.405
8255	CL2X	G	62B/U	93	84	13.5	BCS	24(7 × 32)	BC	PVC	.242
9169	.....	H	71	93	84	13.5	BCS	22(Solid)	BC#	PE	.245
9308	.....	I	—	75	66.0	19.5	SCC	29(Solid)	TC	TFE	.084
84142	.....	E	142	50	69.5	29.0	SCC	18(Solid)	SCC	TFE	.195
84303	.....	C	303	50	69.5	29.0	SCC	18(Solid)	SCC	FEP	.170
84316	.....	A	316	50	69.5	29.0	SCC	26(7 × .0067)	SCC	FEP	.098

‡ Plus Duobond II shield. † Plus second SCC shield. # Plus second TC shield.

MATV COAXIAL CABLES



Belden Number	NEC Type	Fig.	MIL No. RG-	Nom. Imp. Ohms	Vel. of Prop. %	Nom. Cap. pF Ft.	Center Conductor		Shield*	Jacket	
							Mat'l.	AWG Strands		Mat'l.	O.D. (In.)
9275	CATV	J	59U	75	78	17.3	BCS	20 (Solid)	DF*	PVC	.242
9100	CATV	K	59U	75	78	17.3	CCS	20 (Solid)	DB*	PVC	.242
8212	.....	L	59U	75	78	17.3	BCS	20 (Solid)	BC	PE	.242
9274	CM	L	59U	75	78	17.3	BCS	20 (Solid)	BC	PVC	.242
9240	.....	L	59U	75	78	17.3	BCS	20 (Solid)	BC	PVC	.242
8241	CL2X	M	59U	73	66	21	BCS	22 (Solid)	BC	PVC	.242
9244	CL2X	M	59U	73	66	21	BCS	22 (Solid)	BC	PVC	.242
8221	.....	L	59U	80	78	16.3	BCS	22 (Solid)	BC	PVC	.242
9248	CM	J	6U	75	78	17.3	BC	18 (Solid)	DF‡	PVC	.270
9114	CATV	K	6U	75	78	17.3	BCS	18 (Solid)	DB*	PVC	.275
9290	CM	N	6U	75	78	17.3	BC	18 (Solid)	BC	PVC	.290

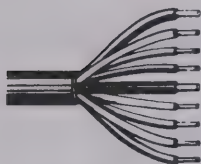
SPECIAL APPLICATION MATV COAXIAL CABLES

8215	.....	N	6AU	75	66	20.5	BCS	21 (Solid)	BC	PE	.332
8232	.....	O	59U	75	78	17.3	BCS	20 (Solid)	BC	PE	.315
8233	.....	O	11U	75	78	17.3	BC	14 (Solid)	BC	PE	.475
8213	.....	L	11U	75	78	17.3	BC	14 (Solid)	BC	PE	.405
9292	.....	J	.....	75	78	17.3	BC	14 (Solid)	DF‡	PVC	.405
9011	.....	J	11U	75	78	17.3	BCS	14 (Solid)	DF*	PVC	.405

* Plus aluminum braid shield. ‡ Plus tinned copper braid shield.

Not authorized at all locations. Please call for complete information.

FIRE ALARM AND TRAY CABLES



A



B



C

Types 9576, 9577 and 9584: Tinned copper, PVC insulated, conductors cabled, black PVC jacket; **Type 9596:** Parallel conductors, one tinned copper, one bare copper, red PVC insulation; **Types 9597, 9596, and 9571:** Bare copper, PVC insulated, conductors cabled, red PVC jacket; **Type 9574:** Same, except addition of Beldfoil shield and drain wire; **Types 9486 thru 9489:** Tinned copper, PVC insulated, nylon overcoat, conductors cabled, black PVC jacket; **Types 9341 thru 9344:** Same except addition of Beldfoil[®] shield and drain wire.

Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Conds.	Insul. Thckns. (In.)	Jacket Thckns. (In.)	Nom. O.D. (In.)
9576	MPR/CMR	A	22 (Solid)	6	.013	.039	.234
9577	MPR/CMR	A	22 (Solid)	9	.013	.039	.267
9584	MPR/CMR	A	22 (Solid)	12	.013	.043	.302
9596	MPR/CMR	B	19 (Solid)	2	.030	.040	.248
9597	MPR/CMR	C	19 (Solid)	4	.016	.040	.248
9598	MPR/CMR	C	19 (Solid)	6	.016	.042	.290
9571	MPR/CMR	D	18 (Solid)	2	.017	.037	.224
9574	MPR/CMR	E	18 (Solid)	2	.017	.037	.228
9486	TC	D	18 (16 × 30)	2	.021	.048	.279
9487	TC	D	16 (26 × 30)	2	.021	.048	.306
9488	TC	D	14 (41 × 30)	2	.027	.048	.359
9489	TC	D	12 (65 × 30)	2	.027	.048	.399
9341	TC	E	18 (16 × 30)	2	.048	.048	.278
9342	TC	E	16 (26 × 30)	2	.048	.048	.304
9343	TC	E	14 (41 × 30)	2	.048	.048	.358
9344	TC	E	12 (65 × 30)	2	.048	.048	.380

POWER LIMITED CIRCUIT CABLE

Types 9407 thru 9412 and 9491 thru 9495: Tinned copper, PVC insulated, conductors cabled, chrome PVC jacket; **Types 9312 thru 9322 and 9363 thru 9367:** Tinned copper, PVC insulated, cabled with Beldfoil[®] tape shield and drain wire, chrome PVC jacket.

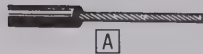
Belden Number	NEC Type	Fig.	AWG and Stranding	No. of Conds.	Insul. Thckns. (In.)	Jacket Thckns. (In.)	Nom. O.D. (In.)
9407	CMR	D	22 (7 × 30)	2	.016	.038	.200
9408	CL3R	D	20 (10 × 30)	2	.016	.038	.214
9409	CMR	D	18 (16 × 30)	2	.016	.038	.230
9410	CL3R	D	16 (26 × 30)	2	.016	.038	.260
9411	CL3R	D	14 (41 × 30)	2	.020	.043	.324
9412	CL3R	D	12 (65 × 30)	2	.032	.053	.424
9322	CMR	E	22 (7 × 30)	2	.016	.038	.202
9320	CL3R	E	20 (10 × 30)	2	.016	.038	.216
9318	CMR	E	18 (16 × 30)	2	.016	.038	.236
9316	CL3R	E	16 (26 × 30)	2	.016	.038	.262
9314	CL3R	E	14 (41 × 30)	2	.022	.043	.326
9312	CL3R	E	12 (65 × 30)	2	.032	.053	.426
9491	CMR	F	22 (7 × 30)	3	.016	.038	.210
9492	CL3R	F	20 (10 × 30)	3	.016	.038	.225
9493	CMR	F	18 (16 × 30)	3	.016	.038	.246
9494	CL3R	F	16 (26 × 30)	3	.016	.038	.274
9495	CL3R	F	14 (41 × 30)	3	.022	.043	.342
9363	CMR	G	22 (7 × 30)	3	.016	.038	.212
9364	CL3R	G	20 (10 × 30)	3	.016	.038	.227
9365	CMR	G	18 (16 × 30)	3	.016	.038	.248
9366	CL3R	G	16 (26 × 30)	3	.020	.038	.276
9367	CL3R	G	14 (41 × 30)	3	.020	.043	.344
9512	CMR	H	22 (7 × 30)	4•	.016	.043	.310
9513	CMR	H	22 (7 × 30)	6•	.016	.043	.326
9514	CMR	H	22 (7 × 30)	8•	.016	.043	.353
9516	CMR	H	22 (7 × 30)	12•	.016	.053	.425
9520	CMR	H	22 (7 × 30)	18•	.016	.053	.488
9521	CMR	H	22 (7 × 30)	22•	.016	.053	.536
9524	CMR	H	22 (7 × 30)	30•	.016	.053	.594
9526	CMR	H	22 (7 × 30)	38•	.016	.063	.631
9527	CMR	H	22 (7 × 30)	54•	.016	.063	.741
9551	CMR	H	22 (7 × 30)	102•	.016	.075	.950
9552	CMR	H	18 (16 × 30)	4•	.016	.043	.376
9553	CMR	H	18 (16 × 30)	6•	.016	.053	.400
9554	CMR	H	18 (16 × 30)	8•	.016	.053	.451
9556	CMR	H	18 (16 × 30)	12•	.016	.053	.481
9559	CMR	H	18 (16 × 30)	18•	.016	.053	.596
9563	CMR	H	18 (16 × 30)	22•	.016	.063	.676
9565	CMR	H	18 (16 × 30)	30•	.016	.063	.751
9328	CMR	I	22 (7 × 30)	4•	.016	.043	.316
9329	CMR	I	22 (7 × 30)	6•	.016	.043	.331
9330	CMR	I	22 (7 × 30)	8•	.016	.043	.360
9331	CMR	I	22 (7 × 30)	12•	.016	.053	.431
9332	CMR	I	22 (7 × 30)	18•	.016	.053	.500
9333	CMR	I	22 (7 × 30)	22•	.016	.053	.551
9335	CMR	I	22 (7 × 30)	38•	.016	.063	.646
9337	CMR	I	22 (7 × 30)	102•	.016	.075	1.030
9368	CMR	I	18 (16 × 30)	4•	.016	.043	.381
9392	CMR	I	18 (16 × 30)	30•	.016	.063	.766

• Cabled in pairs.

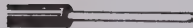
Not authorized at all locations. Please call for complete information.

HOOK-UP WIRE

Tinned copper conductors, PVC insulation.



A



B

HOOK-UP WIRE KITS

Assortments of hook-up wire colors in portable metal dispenser rack. Ones pool of each color is supplied. Pass the FR-1 vertical flame test.

Beld. No.	Wire Type and No.	Stock Colors*
8816	18 (Strnd.)	1-6
	8522-25*	9, 10
8824	20 (Strnd.)	1-6
	8523-25*	9, 10
8825	20 (Strnd.)	2, 4
	8502-100†	5, 9, 10
9531	22 (Strnd.)	2, 5
	8524-100†	6, 9, 10

* 25 ft. spools. † 100 ft. spools.

• STOCK COLORS

Code No.	Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Light blue
7	Violet (purple)
8	Gray (slate)
9	White
10	Black
11	Tan
12	Pink
13	Dark blue
14	White/black
15	White/red
16	White/green
17	White/yellow
18	White/blue
19	White/brown
20	White/orange
21	White/gray
22	White/violet
23	White/black/red
24	White/black/green
25	White/black/yellow
26	White/black/blue
27	White/black/brown
28	White/black/orange
29	White/black/gray
30	White/black/violet
189	Green/yellow

Belden Number	Fig.	AWG and Stranding	Nom. O.D. (in.)	Stock Colors*
U.L. STYLE 1007				
9930	A	30(7 × 38)	.044	1-5, 7-10, 13
9928	A	28(7 × 36)	.047	1-5, 7-10, 13
9926	A	26(7 × 34)	.051	1-5, 7-10, 13
9923	A	24(7 × 32)	.056	1-5, 7-10, 13
9921	A	22(7 × 30)	.062	1-5, 7-10, 13
9919	A	20(7 × 28)	.069	1-5, 7-10, 13
9918	A	18(16 × 30)	.079	1-5, 7-10, 13
9916	A	16(26 × 30)	.092	1-5, 7-10, 13

Belden Number	Fig.	AWG and Stranding	Nom. O.D. (in.)	Stock Colors*
U.L. STYLE 1015				
9924	A	24(7 × 32)	.088	1-5, 9, 10, 13
8920	A	22(7 × 30)	.093	1-5, 9, 10, 13
8919	A	20(10 × 30)	.100	1-5, 9, 10, 13
8918	A	18(16 × 30)	.110	1-5, 9, 10, 13, 189
8917	A	16(26 × 30)	.123	1-5, 9, 10, 13, 189
8916	A	14(41 × 30)	.138	1-5, 9, 10, 13, 189
9912	A	12(65 × 30)	.158	1-5, 9, 10, 13
9910	A	10(65 × 28)	.183	2, 4, 9, 10

Belden Number	Fig.	AWG and Stranding	Nom. O.D. (in.)	Stock Colors*
U.L. STYLE 1061				
9978	B	30(Solid)	.030	1-5, 7-10, 13
9987	A	30(7 × 38)	.032	1-5, 7-10, 13
9977	B	28(Solid)	.033	1-5, 7-10, 13
9986	A	28(7 × 36)	.035	1-5, 7-10, 13
9976	B	26(Solid)	.036	1-5, 7-10, 13
9985	A	26(7 × 34)	.039	1-5, 7-10, 13
9975	B	24(Solid)	.040	1-5, 7-10, 13
9984	A	24(7 × 32)	.044	1-5, 7-10, 13
9983	A	22(7 × 30)	.050	1-5, 7-10, 13
9982	A	20(7 × 28)	.057	1-5, 7-10, 13
9981	A	19(19 × 30)	.066	1-5, 7-10, 13
9980	A	16(19 × 28)	.078	1-5, 7-10, 13

Belden Number	Fig.	AWG and Stranding	Nom. O.D. (in.)	Stock Colors*
MIL-W-76B				
8538	B	24(Solid)	.055	1-13
8525	A	24(7 × 32)	.055	1-13
8530	B	22(Solid)	.059	1-13
8524	A	22(7 × 30)	.064	1-30
8529	B	20(Solid)	.066	1-13
8523	A	20(10 × 30)	.070	1-30
8522	A	18(16 × 30)	.080	1-30
8521	A	16(26 × 30)	.098	1-22
8520	A	14(41 × 30)	.111	1-22
8527	A	12(65 × 30)	.128	1-10

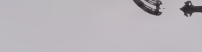
Belden Number	Fig.	AWG and Stranding	Nom. O.D. (in.)	Stock Colors*
MIL-W-16878E/1				
8597	A	28(7 × 36)	.035	1-10
8505	A	26(7 × 34)	.039	1-10, 14-22
8504	A	24(7 × 32)	.044	1-10, 14-22
8503	A	22(7 × 30)	.050	1-10, 14-22
8502	A	20(7 × 28)	.058	1-10, 14-22
8501	A	18(7 × 26)	.068	1-10, 14-22
8500	A	16(19 × 29)	.077	1-10, 14-22

Belden Number	Fig.	AWG and Stranding	Nom. O.D. (in.)	Stock Colors*
MIL-W-16878E/5, 4, 6 TEFLON® INSULATED				
83023	A	24(19 × 36)	.054	1-10
83025	A	22(7 × 30)	.060	1-10
83026	A	22(19 × 34)	.060	1-10
83027	A	20(19 × 32)	.068	1-10
83028	A	20(7 × 28)	.068	1-10
83029	A	18(19 × 30)	.079	1-10
83030	A	16(19 × 29)	.089	1-10
83000	A	30(7 × 38)	.033	1-10
83001	A	28(7 × 36)	.036	1-10
83002	A	26(7 × 34)	.039	1-10
83003	A	24(19 × 36)	.044	1-10
83004	A	24(7 × 32)	.044	1-10
83005	A	22(7 × 30)	.050	1-10
83006	A	22(19 × 34)	.050	1-10
83007	A	20(19 × 32)	.058	1-10
83008	A	20(7 × 28)	.058	1-10
83009	A	18(19 × 30)	.069	1-10
83010	A	16(19 × 29)	.080	1-10
83041	A	32(7 × 40)	.021	1-10
83043	A	30(7 × 38)	.024	1-10
83045	A	28(7 × 36)	.027	1-10
83046	A	26(7 × 34)	.031	1-10
83047	A	24(7 × 32)	.036	1-10
83048	A	24(19 × 36)	.036	1-10
83049	A	22(7 × 30)	.042	1-10
83050	A	22(91 × 34)	.042	1-10

*See color code chart.

Not authorized at all locations. Please call for complete information.

PORTABLE CORDAGE



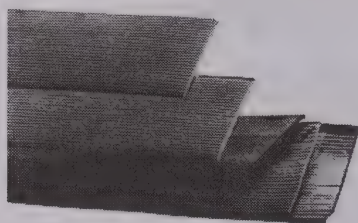
Belden Number	Fig.	UL Type	No. of Conds.	AWG and Stranding
PVC INSULATED LAMP CORD				
19122	A	SPT	2	18 (41 × 34)
8888	A	SPT	2	18 (41 × 34)
19123	A	SPT	2	18 (41 × 34)
19126	A	SPT	2	16 (65 × 34)
RUBBER INSULATED LAMP CORD				
8462	A	SP-1	2	18 (41 × 34)
19115	A	SP-1	2	18 (41 × 34)
NEOPRENE HEATER CORD				
19328	A	HPN	2	18 (41 × 34)
19326	A	HPN	2	16 (65 × 34)
PVC INSULATED CORDAGE				
19140	B	SVT	2	18 (41 × 34)
19348	C	SJT	3	18 (41 × 34)
19349	C	SJT	3	16 (65 × 34)
19352	C	SJT	3	18 (41 × 34)
19353	C	SJT	3	16 (65 × 34)
19354	C	SJT	3	14 (41 × 30)
19362	D	SJT	3	18 (41 × 34)
19363	D	SJT	3	16 (65 × 34)
19364	D	SJT	3	14 (41 × 30)
19350	C	SVT	3	18 (41 × 34)
19401	D	SVT	3	18 (41 × 34)
19403	E	SVT	3	18 (41 × 34)
19402	C	SVT	3	18 (41 × 34)
RUBBER INSULATED CORDAGE				
8452	F	SV	2	18 (41 × 34)
19120	F	SV	2	18 (41 × 34)
8478	G	SJ	2	18 (41 × 34)
8472	G	SJ	2	16 (65 × 34)
19129	H	SJ	3	18 (16 × 30)
19125	H	SJ	3	18 (41 × 34)
19130	H	SJ	3	16 (26 × 30)
19124	H	SJ	3	16 (65 × 34)
8479	H	SJ	3	14 (41 × 30)
8453	H	SV	3	18 (41 × 34)
19109	H	S	3	18 (41 × 34)
19108	H	S	3	16 (65 × 34)
19107	H	S	3	14 (41 × 30)
19106	H	S	3	12 (65 × 30)
19105	H	S	3	10 (105 × 30)
8454	I	.....	4	18 (41 × 34)
8455	J	.....	*	*
NEOPRENE INSULATED CORDAGE				
19227	F	SJO	2	18 (16 × 30)
19228	F	SJO	2	16 (26 × 30)
19204	F	SO	2	18 (41 × 34)
19203	F	SO	2	16 (65 × 34)
19202	F	SO	2	14 (41 × 30)
19201	F	SO	2	12 (65 × 30)
19229	H	SJO	3	18 (16 × 30)
19230	H	SJO	3	16 (26 × 30)
19209	H	SO	3	18 (41 × 34)
19208	H	SO	3	16 (65 × 34)
19207	H	SO	3	14 (41 × 30)
19206	H	SO	3	12 (65 × 30)
19205	H	SO	3	10 (105 × 30)
19217	I	SO	4	14 (41 × 30)
19216	I	SO	4	12 (65 × 30)
LOW LEAKAGE PVC INSULATED CORDAGE				
9997	K	SJT	3	18 (41 × 34)
9998	K	SJT	3	16 (65 × 34)

* Two conductors 18 AWG (41 × 34) and three conductors 20 AWG (26 × 34).

SOLID TINNED COPPER BUS BAR WIRE

Belden Number	AWG	Nom. O.D. (In.)	Belden Number	AWG	Nom. O.D. (In.)
8025	30	.010	8020	20	.032
8024	28	.013	8019	18	.040
8023	26	.016	8013	16	.051
8022	24	.020	8012	14	.064
8021	22	.025	8011	12	.081

Not authorized at all locations. Please call for complete information.



UNSHIELDED FLAT CABLE—.050" PITCH

Dimensions Inch

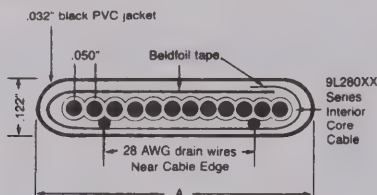


Standard .050" pitch ribbon cable with gray PVC insulation. Red conductor identification stripe. Cable can be terminated from either top or bottom. Easily slit to allow breakouts of one or more conductors. UL Style 2651. **Conductor Spacing:** .050". **Conductors per Cable:** 10 to 64. **Conductor Size:** 28 AWG (7 × 36) stranded. **Voltage Rating:** 300V. **Temperature Rating:** 105°C. **Insulation Resistance:** 10,000 megohms (10 ft. sample). **Standard Length:** 100 ft. box and 300 ft. box; other lengths available on request. **Nom. Cable Thickness:** .035". Passes VW-1 Vertical Flame Test.

Belden No.	No. of Conductors	Dimensions (In.)	
		Width	Thickness
9L28009	9	.45	.035
9L28010	10	.50	.035
9L28014	14	.70	.035
9L28015	15	.75	.035
9L28016	16	.80	.035
9L28020	20	1.00	.035
9L28024	24	1.20	.035
9L28025	25	1.25	.035
9L28026	26	1.30	.035
9L28034	34	1.70	.035
9L28036	36	1.80	.035
9L28037	37	1.85	.035
9L28040	40	2.00	.035
9L28050	50	2.50	.035
9L28060	60	3.00	.035
9L28064	64	3.20	.035

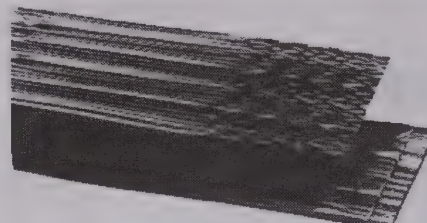
SHIELDED, JACKETED FLAT CABLE—.050" PITCH

Dimensions Inch



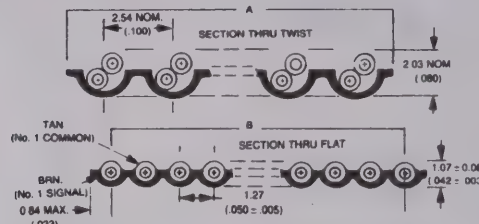
The core is Belden's 9L280XX series (listed above). Two 28 AWG drain wires are laid near the edges. The cable is then 100% shielded with Mylar® aluminum foil and covered with .032" black PVC jacket. Designed to meet FCC requirements and to reduce EMI-RFI. UL style 20081. **Conductor Spacing:** .050". **Conductors per Cable:** 9 to 64. **Conductor Size:** 28 AWG (7 × 36) stranded. **Voltage Rating:** 300V. **Temperature Rating:** -20°C to +150°C. **Insulation Resistance:** 10,000 megohms (10 ft. sample). **Standard Length:** 100 ft. box; other lengths available on request. **Nom. Cable Thickness:** .122". **Jacket Thickness:** .032". **Shield Coverage:** 100%. Passes VW-1 Vertical Flame Test.

Belden No.	No. of Conductors	Dimensions (In.)	
		Width	Thickness
9L28309	9	.55	.122
9L28310	10	.60	.122
9L28315	15	.85	.122
9L28320	20	1.10	.122
9L28325	25	1.35	.122
9L28326	26	1.40	.122
9L28334	34	1.80	.122
9L28336	36	1.95	.122
9L28337	37	1.90	.122
9L28340	40	2.10	.122
9L28350	50	2.60	.122
9L28360	60	3.10	.122
9L28364	64	3.30	.122



UNSHIELDED VARI-TWIST™ FLAT CABLE

Dimensions mm (Inch)

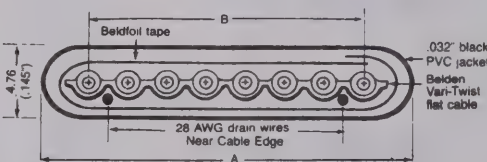


Vari-Twist flat cable consists of PVC perinsulated single conductors, laminated to a single clear PVC substrate. The pairs are twisted to reduce crosstalk; each adjacent pair is twisted in the opposite direction. 18-inch twisted sections alternate with 2-inch flat sections of .050" spaced conductors. The cable can be mass terminated (in programmed flat section) with any existing IDC with .0500" spacing. Length of twisted and/or flat sections can be made to your specifications on request. In fact, Vari-Twist can have two different alternating twist lengths in the same continuous cable. UL style 2693 and/or 2697. **Pairs per Cable:** 5 to 32. **Conductor Size:** 28 AWG (7 × 36) stranded. **Voltage Rating:** 300V rms. **Temperature Rating:** 105°C. Standard putup is 100 ft. box.

Belden No.	No. of Conductors	Dimensions (In.)	
		A	B
9V28010	5	.62	.45
9V28014	7	.82	.65
9V28016	8	.92	.75
9V28020	10	1.12	.95
9V28026	13	1.42	1.25
9V28034	17	1.82	1.65
9V28036	18	1.80	1.75
9V28040	20	2.12	1.95
9V28050	25	2.62	2.45
9V28060	30	3.12	2.95
9V28064	32	3.27	3.10

SHIELDED, JACKETED VARI-TWIST™ FLAT CABLE

Dimensions mm (Inch)

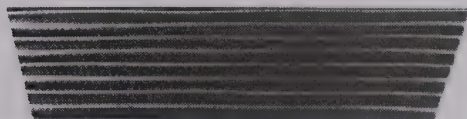


The core is Belden's 9V280XX series (listed above). Two 28 AWG drain wires are laid next to the cable edges. Cables are then 100% shielded with Mylar® aluminum foil and covered with .032" extruded black PVC jacket. Designed to address FCC requirements and to reduce EMI, RFI. Cables also meet UL Style 20081 requiring the thin wall, 300V rating and 105°C rating. **Flat Interval Conductor Spacing:** .050". **Pairs per Cable:** 5 to 32. **Conductor Size:** 28 AWG, stranded. **Voltage Rating:** 300V rms. **Temperature Rating:** 105°C. **Standard Putup:** 100 ft. box. Length of twisted and/or flat sections can be made to your specifications on request.

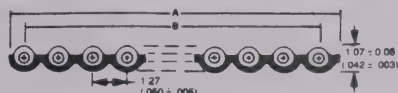
Belden No.	No. of Conductors	Dimensions (In.)	
		A	B
9V28310	5	.62	.45
9V28314	7	.82	.65
9V28316	8	.92	.75
9V28320	10	1.12	.95
9V28326	13	1.42	1.25
9V28334	17	1.82	1.65
9V28336	18	1.90	1.75
9V28340	20	2.12	1.95
9V28350	25	2.62	2.45
9V28360	30	3.12	2.95
9V28364	32	3.27	3.10

Not authorized at all locations. Please call for complete information.

RAINBOW FLAT CABLE — .050" PITCH



DIMENSIONS mm (inches)



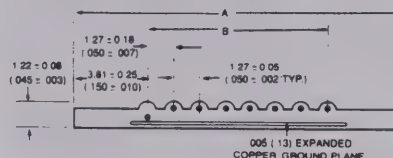
PVC insulated conductors laminated to a clear PVC film. Easy termination to any insulation displacement connector (IDC). Color coding provides quick conductor identification, UL Style 2884. **Conductor Spacing:** .050". **Conductors per Cable:** 10 to 64. **Conductor Size:** 28 AWG (7 × 36) stranded. **Voltage Rating:** 300V. **Temperature Rating:** 105°C. **Insulation Resistance:** 10,000 megohms (10 ft. sample). **Standard Length:** 100 ft. box; other lengths available on request. **Nom. Cable Thickness:** .042". **Color Code:** Brown, red, orange, yellow, green, blue, violet, gray, white, black; then repeats. Passes VW-1 Vertical Flame Test. CSA certified cable available on request.

Belden No.	NEC Type	No. of Conductors	Dimensions (In.)	
			A	B
9R28010		10	.50	.45
9R28014		14	.70	.65
9R28016		16	.80	.75
9R28020		20	1.00	.95
9R28024		24	1.20	1.15
9R28025		25	1.25	1.20
9R28026		26	1.30	1.25
9R28034		34	1.70	1.65
9R28036		36	1.80	1.75
9R28037		37	1.85	1.80
9R28040		40	2.00	1.95
9R28050		50	2.50	2.45
9R28060		60	3.00	2.95
9R28064		64	3.20	3.15

GROUND PLANE CABLE



DIMENSIONS mm (Inch)



Designed to stabilize electrical characteristics, 28 AWG stranded conductors are laminated with PVC on .050" centers. An expanded mesh (copper ground plane) is laminated to the bottom. A 28 AWG drain wire is in contact with the mesh for grounding purposes. Terminates with any standard IDC UL style 2682. **Conductor Spacing:** .050". **Conductors per Cable:** 20 to 60. **Conductor Size:** 28 AWG (7 × 36) stranded tinned copper. **Voltage Rating:** 300V. **Temperature Rating:** 105°C. **Insulation Resistance:** 10,000 megohms (10 ft. sample). **Standard Length:** 100 ft. box **Nom. Cable Thickness:** .045". **Ground Plane:** Expanded copper mesh. Passes VW-1 Vertical Flame Test. Black stripe on insulation indicates position of drain wire.

Belden No.	NEC Type	No. of Conductors	Dimensions (In.)	
			A	B
9GP1020		20	1.25	.95
9GP1026		26	1.55	1.25
9GP1034		34	1.95	1.65
9GP1040		40	2.25	1.95
9GP1050		50	2.75	2.45
9GP1060		60	3.25	2.95

FEP RAINBOW FLAT CABLE — .050" PITCH

FEP rainbow flat cable is designed for high temperature applications and recommended for use inside electronic chassis. This cable is available with 10 to 64 28-AWG silver plated copper conductors (7 × 36 stranding) on .050" centers. **Voltage Rating:** 150V rms. **Propagation Delay:** GSG 1.3 ns/ft. **Insulation Resistance:** 10,000 megohms (10 ft. sample). **UL Listed; File No. 20468.**

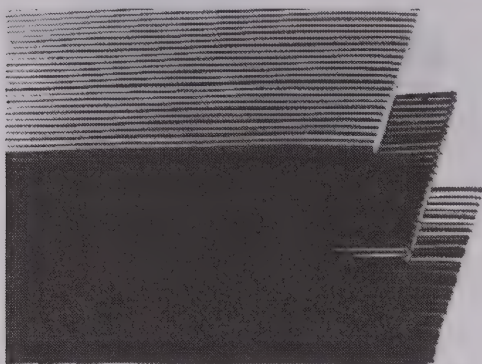
Belden No.	NEC Type	No. of Conductors	Dimensions (In.)	
			A	B
8R28010		10	.500	.450
8R28014		14	.700	.650
8R28016		16	.800	.750
8R28020		20	1.000	.950
8R28024		24	1.200	1.150
8R28025		25	1.250	1.200
8R28026		26	1.300	1.250
8R28034		34	1.700	1.650

Belden No.	NEC Type	No. of Conductors	Dimensions (In.)	
			A	B
8R28036		36	1.800	1.750
8R28037		37	1.850	1.800
8R28040		40	2.000	1.950
8R28050		50	2.500	2.450
8R28060		60	3.000	2.950
8R28064		64	3.200	3.150

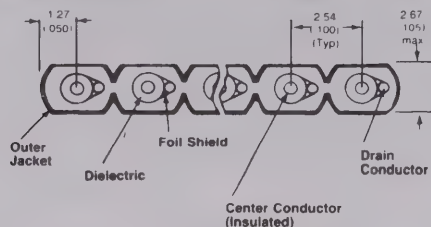
WE CAN SUPPLY ALL YOUR REQUIREMENTS FOR INDUSTRIAL ELECTRONIC EQUIPMENT AND PARTS. WE OFFER A COMPLETE LINE WITH UP-TO-DATE STOCK, FAST DELIVERY AND PRODUCTION QUANTITY PRICING. CALL FOR INFORMATION ON NEW OR UNLISTED ITEMS.

Not authorized at all locations. Please call for complete information.

RIBBON COAX CABLE



DIMENSIONS mm (inch)



Designed for very high computer speeds or high isolation requirements. Precisely manufactured to allow mass stripping and mass termination to the Amp, Inc. ribbon coaxial connector line. Can be mass terminated or discretely terminated, depending on the need. Breakouts can be made easily for terminations at different locations. UL style 20115. **Conductor Spacing:** $100'' \pm .009''$. **Conductors per Cable:** 4 to 25. **Voltage Rating:** 30V. **Temperature Rating:** -40°C to $+105^{\circ}\text{C}$ (UL rating, 60°C max.) **Crosstalk:** Values for a 3.5 or 7 nsec. rise time are less than .1% for both far end and near end. **Shield:** Mylar reinforced aluminum with tinned copper drain wires. **Nominal Cable Thickness:** $105'' \pm .005''$. **Standard Length:** 100 ft.

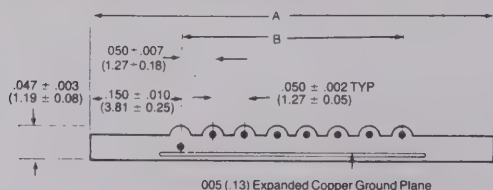
50-OHM RIBBON COAX CABLE

Conductors: 28 AWG copper, coated with an alkyd baked enamel. **Jacket:** Black PVC, .028" wall. **Impedance:** 50 ohms $\pm$ 3 ohms. **Capacitance:** 31 pF $\pm$ 1 pF ft. **Velocity of Propagation:** 66%. **Propagation Delay:** 1.4 nsec. ft. **Risetime Degradation:** Less than 400 picosec. 10 ft. (20-80% levels). **DC Resistance:** Center conductor and shield 72.9 ohms 1000 ft. max. at 20°C . **Dielectric:** Solid Polypropylene, .041" $\pm$.002 dia.

A AND B FLAT CABLE—.050" PITCH

A combination of standard 26-conductor Ground Plane Cable and standard 30-pair vari-twist Cable with an overall Beldfoil aluminum-polyester shield, flattened tinned copper drain wire, and overall PVC jacket.

GROUND PLANE CABLE DIMENSIONS INCH (MM)



75-OHM RIBBON COAX CABLE

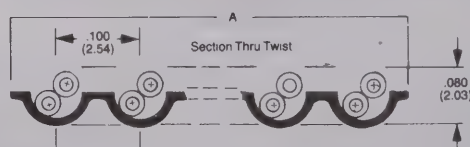
Conductors: 30 AWG copper coated with an alkyd baked enamel. **Jacket:** Gray PVC .025" wall. **Impedance:** 75 $\pm$ 4 ohms. **Capacitance:** 17.1 pF $\pm$ 1 pF ft. **Velocity of Propagation:** 78%. **Propagation Delay:** 1.35 nsec. ft. (20-80% levels). **DC Resistance:** Center conductor and shield, 112.1 ohms 1000 ft. max. at 20°C . **Dielectric:** Foam Polypropylene, .047" $\pm$.002" dia.

93-OHM RIBBON COAX CABLE

Conductors: 30 AWG copper coated with an alkyd baked enamel. **Jacket:** Red PVC, .017" wall. **Impedance:** 93 $\pm$ 5 ohms. **Capacitance:** 14 pF $\pm$ 2 pF ft. **Velocity of Propagation:** 78%. **Propagation Delay:** 1.35 nsec. ft. **Risetime Degradation:** Less than 350 picosec. 10 ft. (20-80% levels). **DC Resistance:** Center conductor and shield 112.1 ohms 1000 ft. max. at 20°C . **Dielectric:** Foam Polypropylene, .064" $\pm$.002 dia.

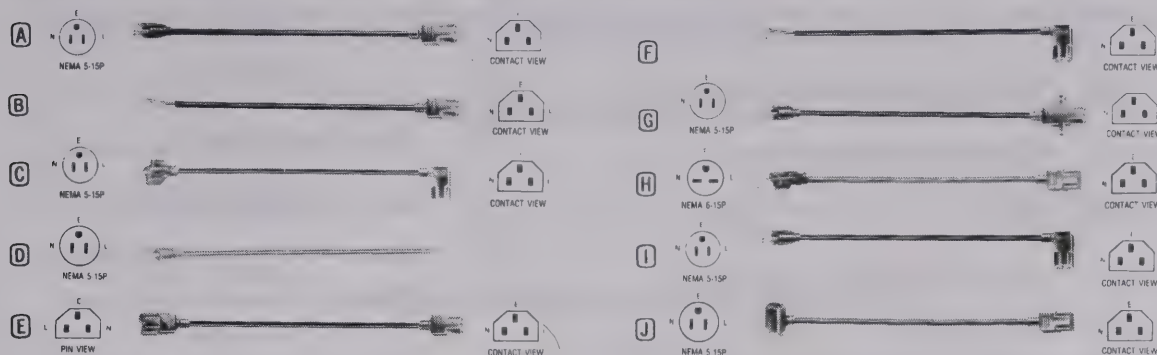
Belden No.	NEC Type	Number of Conductors	Cond. Size (AWG)	Nom. Dimensions (In.)	
				Width	Thickness
50-OHM					
9K50004	CL2	4	28	.400	.105
9K50005	CL2	5	28	.500	.105
9K50006	CL2	6	28	.600	.105
9K50007	CL2	7	28	.700	.105
9K50008	CL2	8	28	.800	.105
9K50009	CL2	9	28	.900	.105
9K50010	CL2	10	28	1.000	.105
9K50013	CL2	13	28	1.300	.105
9K50017	CL2	17	28	1.700	.105
9K50020	CL2	20	28	2.000	.105
9K50025	CL2	25	28	2.500	.105
75-OHM					
9K75004	CL2	4	30	.400	.105
9K75005	CL2	5	30	.500	.105
9K75006	CL2	6	30	.600	.105
9K75007	CL2	7	30	.700	.105
9K75008	CL2	8	30	.800	.105
9K75009	CL2	9	30	.900	.105
9K75010	CL2	10	30	1.000	.105
9K75013	CL2	13	30	1.300	.105
9K75017	CL2	17	30	1.700	.105
9K75020	CL2	20	30	2.000	.105
9K75025	CL2	25	30	2.500	.105
93-OHM					
9K93004	.....	4	30	.400	.105
9K93005	.....	5	30	.500	.105
9K93006	.....	6	30	.600	.105
9K93007	.....	7	30	.700	.105
9K93008	.....	8	30	.800	.105
9K93009	.....	9	30	.900	.105
9K93010	.....	10	30	1.000	.105
9K93013	.....	13	30	1.300	.105
9K93017	.....	17	30	1.700	.105
9K93020	.....	20	30	2.000	.105
9K93025	.....	25	30	2.500	.105

VARI-TWIST CABLE DIMENSIONS INCH (MM)



DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.

Not authorized at all locations. Please call for complete information.



THREE CONDUCTOR POWER SUPPLY CORDS WITH CEE COLOR CODING

Shielded and unshielded power supply cords for electronic equipment. All cords incorporate the CEE (European) color coding and are UL listed, CSA certified, and OSHA acceptable. Cords of 18 AWG have 41 × 34 stranding. 16 AWG have 65 × 34 stranding and 14 AWG cords have 41 × 30 stranding. Jacket color is black.

Belden Number	Fig.	Lgth.	AWG	Rating Amps @ 125 V	Cord Type
UNSHIELDED					
17250•	A	7'6"	18	10	SVT
17251	A	7'6"	18	10	SVT
17254	B	7'6"	18	10	SVT
17255•	A	7'6"	16	13	SJT
17500	A	6'7"	18	10	SJT
17501	A	9'10"	18	10	SJT
17502	A	6'7"	16	13	SJT
17503	A	9'10"	16	13	SJT
17504	A	6'7"	14	15	SJT
17505	A	9'10"	14	15	SJT
17506	C	6'7"	18	10	SJT
17507	C	9'10"	18	10	SJT
17508	C	6'7"	16	13	SJT
17509	C	9'10"	16	13	SJT
17512	D	6'7"	18	10	SJT
17513	D	9'10"	18	10	SJT
17514	D	6'7"	16	13	SJT
17515	D	9'10"	16	13	SJT
17516	D	6'7"	14	15	SJT
17517	D	9'10"	14	15	SJT
17518	B	6'7"	18	10	SJT
17519	B	9'10"	18	10	SJT
17520	B	6'7"	16	13	SJT
17521	B	9'10"	16	13	SJT
17523	E	1'8"	18	10	SJT
17524	E	3'3"	18	10	SJT
17525	E	3'3"	16	13	SJT
17534	D	6'7"	18	10	SVT
17535	D	9'10"	18	10	SVT
17536	F	6'7"	18	10	SJT
17537	F	9'10"	18	10	SJT
17539	F	9'10"	16	13	SJT
17550	G	6'7"	18	10	SVT
17551	G	9'10"	18	10	SVT
17566	H	6'7"	18	†	SVT
17567	H	9'10"	18	†	SVT
17568	H	6'7"	18	†	SJT
17569	H	9'10"	18	†	SJT
17747▲	D	6'7"	18	10	SVT
17748▲	D	6'7"	18	10	SJT
17757▲	A	7'6"	18	10	SVT
17758▲	A	6'7"	18	10	SJT

• North American color coding.

▲ 105°C, VW-1 rated.

† 10A-250V

Belden Number	Fig.	Lgth.	AWG	Rating Amps @ 125 V	Cord Type
SHIELDED					
17600	A	6'7"	18	10	SJT
17601	A	9'10"	18	10	SJT
17602	A	6'7"	16	13	SJT
17603	A	9'10"	16	13	SJT
17604	A	6'7"	14	15	SJT
17605	A	9'10"	14	15	SJT
17606	I	6'7"	18	10	SJT
17607	I	9'10"	18	10	SJT
17608	I	6'7"	16	13	SJT
17609	I	9'10"	16	13	SJT
17612	D	6'7"	18	10	SJT
17613	D	9'10"	18	10	SJT
17614	D	6'7"	16	13	SJT
17615	D	9'10"	16	13	SJT
17616	D	6'7"	14	15	SJT
17617	D	9'10"	14	15	SJT
17618	B	6'7"	18	10	SJT
17619	B	9'10"	18	10	SJT
17620	B	6'7"	16	13	SJT
17621	B	9'10"	16	13	SJT
17624	E	3'3"	18	10	SJT
17625	E	3'3"	16	13	SJT
17636	F	6'7"	18	10	SJT
17637	F	9'10"	18	10	SJT
17650	D	6'7"	18	10	SVT
17651	D	9'10"	18	10	SVT
17660	A	6'7"	18	10	SVT
17661	A	9'10"	18	10	SVT
17666‡	J	6'7"	18	10	SVT
17667‡	J	9'10"	18	10	SJT
17669‡	J	9'10"	18	10	SVT
17720▲	D	6'7"	18	10	SJT
17725▲	A	6'7"	18	10	SJT
17729▲	A	6'7"	18	10	SVT
17734	G	6'7"	18	10	SVT
17740	D	6'7"	18	10	SVT
17741	D	9'10"	18	10	SVT
17742	A	6'7"	18	10	SVT
17743	A	9'10"	18	10	SVT
17745	I	6'7"	18	10	SVT
17746	I	9'10"	18	10	SVT
17749	B	6'7"	18	10	SVT
17750	B	9'10"	18	10	SVT
17751	F	6'7"	18	10	SVT
17752	F	9'10"	18	10	SVT
17753	E	3'3"	18	10	SVT

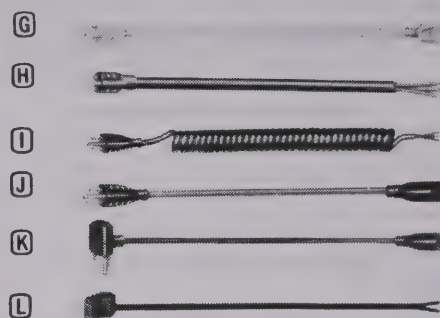
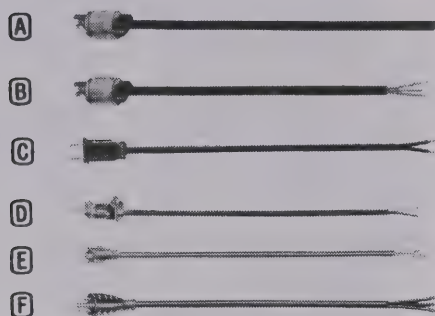
‡ Male plug has outlet on top.

▲ 105°C, VW-1 rated.

**NEED VALUE-ADDED SERVICES?
CALL US FOR INFORMATION.**

**Not authorized at all locations. Please call for
complete information.**

THREE CONDUCTOR UNSHIELDED POWER SUPPLY CORDS WITH NORTH AMERICAN COLOR CODING



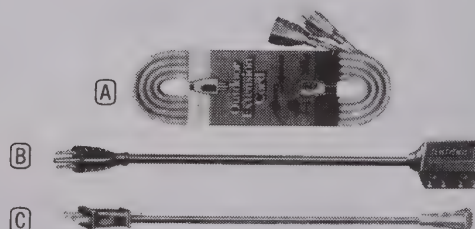
Belden Number	Fig.	Lgth.	AWG and Stranding	Rating Amps (a) 125 V	Cord Type	Jacket Color
17005*	A	8'	18 (41 × 34)	10	SJT	Brown
17006*	A	8'	16 (65 × 34)	13	SJT	Brown
17009†	B	8'	18 (41 × 34)	10	SJT	Gray
17106	C	6'	18 (41 × 34)	10	SPT-1	■
17109	C	9'	18 (41 × 34)	10	SPT-1	Brn/Wht
17205	D	6'	18 (41 × 34)	10	SVT	Blk/Gry
17236	E	6'	18 (41 × 34)	10	SV	Black
17237	E	6'	18 (41 × 34)	10	SVT	Gray
17238	E	8'	18 (41 × 34)	10	SV	Black
17239	E	8'	18 (41 × 34)	10	SVT	Gray
17276	F	20'	16 (26 × 30)	13	SJT	Gray
17280	G	7 1/2'	18 (41 × 34)	7	SVT	Blk/Gry
17308	D	8'	18 (16 × 30)	10	SJ	Black
17316	E	6'	18 (41 × 34)	10	SJE	Black
17318	E	8'	18 (41 × 34)	10	SJE	Black
17328	D	8'	16 (26 × 30)	13	SJ	Black
17405	F	6'	18 (16 × 30)	10	SJT	Gray
17406	F	6'	18 (16 × 30)	10	SJ	Black
17407	F	8'	18 (16 × 30)	10	SJT	Gray
17408	F	8'	18 (16 × 30)	10	SJ	Black
17409	F	8'	18 (16 × 30)	10	SJO	Black
17412	F	12'	18 (16 × 30)	10	SJ	Black
17419	F	9'	16 (26 × 30)	13	SJ	Black
17422	F	12'	16 (26 × 30)	13	SJ	Black
17425	F	15'	16 (26 × 30)	13	SJ	Black
17447	I	6' §	18 (41 × 34)	10	SJO	Black
17448	I	6' §	16 (65 × 34)	13	SJO	Black
17449	I	12' §	17 (65 × 34)	13	SJO	Black
17461	J	10'	16 (26 × 30)	13	SJ	Black
17462•	K	8'	16 (26 × 30)	13	SJT	Black
17463•	K	15'	16 (26 × 30)	13	SJT	Black
17629	H	9'	14 (41 × 30)	15	SJ	Black
17635	H	15'	14 (41 × 30)	15	SJ	Black
17902‡	L	2'	18 (41 × 34)	1	SPT-1	Black
17903‡	L	3'	18 (41 × 34)	1	SPT-1	Black
17904‡	L	4'	18 (41 × 34)	1	SPT-1	Black
17905‡	L	5'	18 (41 × 34)	1	SPT-1	Black
17906‡	L	6'	18 (41 × 34)	1	SPT-1	Black
17952*	G	8'	18 (41 × 34)	7	SVT	Gray

* Low leakage cord with hospital grade plug. † With hospital grade plug. ■ Available in brown, gray, or ivory. § Extended length. • Male plug has outlet on top. ‡ Plug attached at 45° angle to fit most equipment cooling fans.

EXTENSION CORDS

Belden Number	Fig.	Lgth.	AWG and Stranding	Rating Amps (a) 125 V	Cord Type*
THREE CONDUCTORS					
17132	A	10'	16 (10 × 26)	13	SJTW-A
17147	A	25'	16 (10 × 26)	13	SJTW-A
17475	B	25'	16 (26 × 30)	13	SJO
17675	B	25'	14 (41 × 30)	15	SJT
17676	B	50'	14 (41 × 30)	15	SJT
TWO CONDUCTORS					
17870	D	8'	16 (65 × 34)	15	HPN

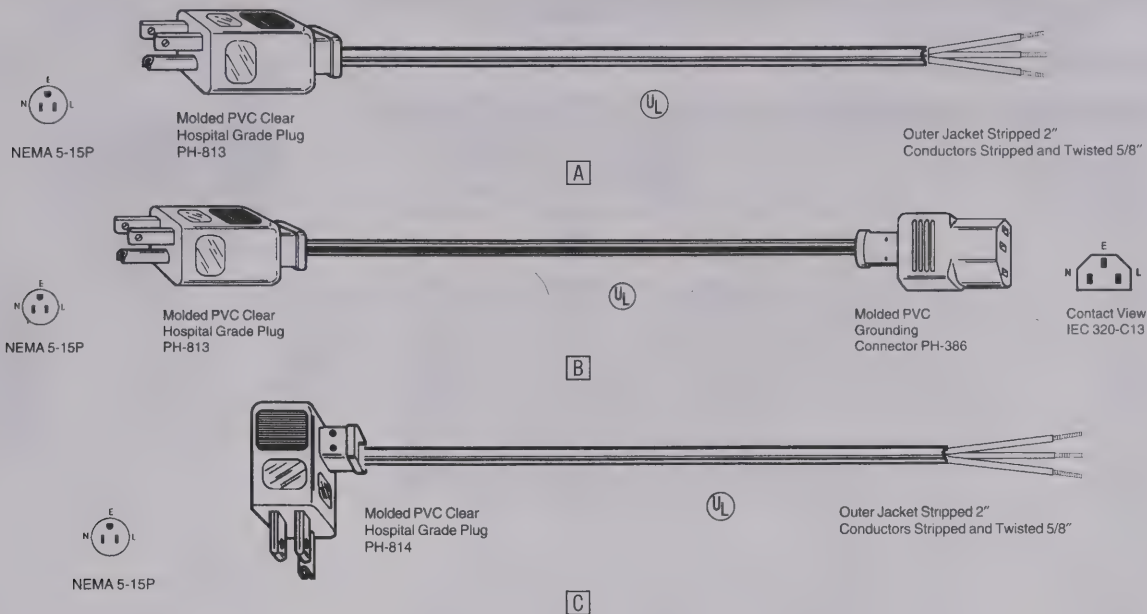
*Type SJTW-A colored orange; all others black.



**WE HAVE ACCESS TO A NATIONAL WAREHOUSE
THROUGH OUR BUYING GROUP ASSOCIATION.**

**Not authorized at all locations. Please call for
complete information.**

SERIES 2005 MEDICORD™ MOLDED HOSPITAL-GRADE(GREEN DOT) POWER SUPPLY CORDS



Belden's Medicord is a rugged, molded, Hospital-grade cord that is available in straight and right-angle plug styles. For critical medical applications, specify SJT low-leakage cordage (meets UL 544), with maximum leakage of 7 microamps at 120 VAC from each circuit conductor to grounding conductor; 15 microamps from each circuit through the cord jacket. The Medicord is also available with SJT PVC for applications where leakage is not a concern.

- "Hospital-Grade" and green dot on face of plug molding.
- Solid nickel-plated brass prongs and U-shaped ground pin.
- Soldered connections to prongs and ground pin.
- Texturized (sandy finish) molded plug with clear "windows" on all four sides for easy inspection of soldered connections.
- Recessed finger pulls for easy insertion and withdrawal at outlets.
- Metallic strain relief molded-in to anchor cordage.
- Plug molding compound meets UL 94V-0 Flame Test.
- Meets requirements of UL 817 Hospital Grade Attachment Plug and CSA C22 No. 21 Hospital Grade Attachment Plug.

Cord Length: 8 ft. (2.44 m). **Color:** Nickel gray (clear plug). **Packaging:** Single. **Color Coding:** North American.

Trade No.	AWG (Stranding) [Dia. in mm]	Nom. O.D.		Rating			Type of Cordage
		In.	mm	Watts	Amps	Volts	
FIG. A							
17010	18 (41 × 34) [1.19]	.430	10.93	1250	10	125	SJT, low leakage
17011	16 (65 × 34) [1.19]	.475	12.06	1625	13	125	SJT, low leakage
17030	18 (41 × 34) [1.19]	.315	8.00	1250	10	125	SJT
FIG. B							
17015	18 (41 × 34) [1.19]	.430	10.93	1250	10	125	SJT, low leakage
17016	16 (65 × 34) [1.19]	.475	12.06	1625	13	125	SJT, low leakage
17031	18 (41 × 34) [1.19]	.315	8.00	1250	10	125	SJT
FIG. C							
17035	18 (42 × 34) [1.19]	.315	8.00	1250	10	125	SJT
17034	16 (65 × 34) [1.47]	.475	12.06	1625	13	125	SJT, low leakage

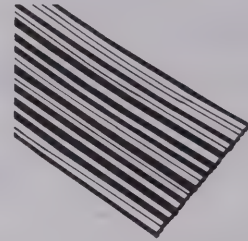
**WE CARRY MOST
MAJOR BRANDS. IF YOU CAN'T FIND WHAT YOU WANT,
CALL US FOR INFORMATION.**

**Not authorized at all locations. Please call for
complete information.**

FLAT / RIBBON CABLE

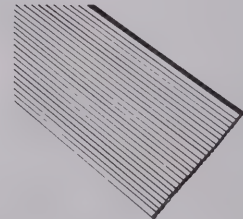
3302 SERIES - .050" COLOR CODED

PART NUMBER	DESCRIPTION
3302/8	8 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/9	9 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/10	10 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/14	14 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/15	15 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/16	16 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/20	20 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/25	25 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/26	26 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/34	34 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/36	36 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/37	37 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/40	40 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/50	50 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/60	60 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"
3302/64	64 CONDUCTOR COLOR FLAT CABLE, 28 AWG STRANDED,.050"



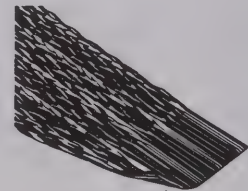
3365 SERIES - .050" PLAIN GRAY

3365/9	9 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/10	10 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/14	14 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/15	15 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/16	16 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/20	20 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/25	25 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/26	26 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/34	34 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/36	36 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/37	37 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/40	40 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/50	50 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/60	60 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/64	64 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"
3365/72	72 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.050"



1700 SERIES - .050" COLOR CODED TWISTED PAIR

1700/26	26 CONDUCTOR TWIST FLAT CABLE, 28 AWG STRANDED,.050"
1700/34	34 CONDUCTOR TWIST FLAT CABLE, 28 AWG STRANDED,.050"
1700/40	40 CONDUCTOR TWIST FLAT CABLE, 28 AWG STRANDED,.050"
1700/50	50 CONDUCTOR TWIST FLAT CABLE, 28 AWG STRANDED,.050"
1700/64	64 CONDUCTOR TWIST FLAT CABLE, 28 AWG STRANDED,.050"



3756 SERIES - .025" PLAIN GRAY

3756/26	26 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.025"
3756/34	34 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.025"
3756/40	40 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.025"
3756/50	50 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.025"
3756/60	60 CONDUCTOR GRAY FLAT CABLE, 28 AWG STRANDED,.025"



3759 SERIES - .050" ROUND JACKETED

3759/26	26 CONDUCTOR RND JACK FLAT CABLE, 28 AWG STRANDED,.050"
3759/37	37 CONDUCTOR RND JACK FLAT CABLE, 28 AWG STRANDED,.050"
3759/40	40 CONDUCTOR RND JACK FLAT CABLE, 28 AWG STRANDED,.050"
3759/50	50 CONDUCTOR RND JACK FLAT CABLE, 28 AWG STRANDED,.050"
3759/64	64 CONDUCTOR RND JACK FLAT CABLE, 28 AWG STRANDED,.050"



3659 SERIES - .050" ROUND SHIELDED JACKETED

3659/26	26 CONDUCTOR RND SHLD FLAT CABLE, 28 AWG STRANDED,.050"
3659/37	37 CONDUCTOR RND SHLD FLAT CABLE, 28 AWG STRANDED,.050"
3659/40	40 CONDUCTOR RND SHLD FLAT CABLE, 28 AWG STRANDED,.050"
3659/50	50 CONDUCTOR RND SHLD FLAT CABLE, 28 AWG STRANDED,.050"
3659/64	64 CONDUCTOR RND SHLD FLAT CABLE, 28 AWG STRANDED,.050"

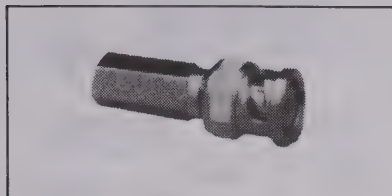




BNC CO-AXIAL CONNECTORS

Twist-On 1 Piece Construction

- Crimpless and Solderless

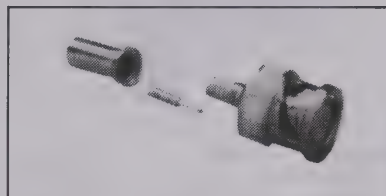


Crimp Type 2 Piece Construction Solderless



Commercial-Mil 3 Piece Construction

- Crimp Center Pin • Crimp Braid



BULK	CABLE TYPE	PACKAGED
27-9050	RG 59 & 62	27-9050P
27-9051	RG-58	27-9051P
27-9052	RG-6	27-9052P
27-9054	RG-59 & 62 Teflon	27-9054P
27-9058	Belden 8281	27-9058P
27-9059	RG-58 Teflon	27-9059P
27-9202	RG-58 AU	27-9202P
27-9206	RG 58 Thin Net	27-9206P

BULK	CABLE TYPE	PACKAGED
27-9000	RG 59 & 62	27-9000P
27-9001	RG-58	27-9001P
27-9002	RG-6	27-9002P
27-9006	Belden 8281	27-9006P
27-9009	RG-59 & 62 Teflon	27-9009P
27-9200	RG-58 AU	27-9200P
27-9204	RG-58 Teflon	27-9204P
27-9207	RG-58 Thin Net	27-9207P
27-9209	RG-6 Teflon	27-9209P
27-9210	RG-59, 62 MATV (18-24 AWG)	27-9210P

BULK	CABLE TYPE	PACKAGED
27-9100	RG 59 & 62, 140, 210	27-9100P
27-9101	RG-58, 141	27-9101P
27-9102	RG-6	27-9102P
27-9103	RG-59 & 62 Teflon	27-9103P
27-9104	Belden 8281	27-9104P
27-9105	RG-174, 187, 188 & 316	27-9105P
27-9108	RG-8x Mini 8	27-9108P
27-9201	RG-58AU	27-9201P
27-9205	RG-58 Teflon	27-9205P
27-9208	RG-58 Thin Net	27-9208P
27-9235	RG-122	27-9235P
27-9236	RG-142, 400, 223	27-9236P
27-9237	RG-180, 195	27-9237P
27-9238	RG-303	27-9238P
27-9239	RG-450 Pro Flex	27-9239P
27-9241	RG-179	27-9241P
27-9254	Belden 8218	27-9254P
27-9293	RG-11	27-9293P
27-9119	Belden 89907	27-9119P

- FIELD INSTALLABLE -
"Strip the Wire and Twist It On"

Standard Type 3 Piece Solder or Crimp



BULK	CABLE TYPE	PACKAGED
27-9022	RG 58	27-9022P
27-9023	RG-59 & 62	27-9023P
27-9024	RG-6	27-9024P
27-9025	Teflon 59 & 62	27-9025P
27-9026	RG-8x Mini 8	27-9026P
27-9027	Belden 8281	27-9027P

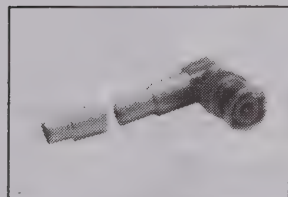
Standard Type Solder 6 Pieces



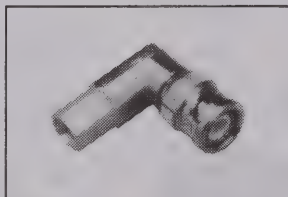
BULK	CABLE TYPE	PACKAGED
27-9020	RG-59 & 62 (UG-260U)	27-9020P
27-9021	RG-58 (UG-88U)	27-9021P

BNC RIGHT ANGLE / FEMALE CONNECTORS

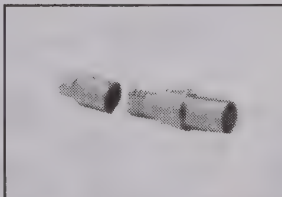
Crimp Type Right Angle Two Piece Construction



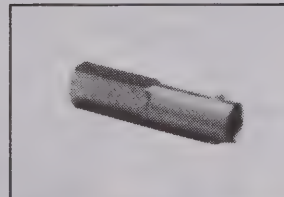
Twist-On Right Angle



UG-89 Type Two Piece Construction Female



UG-89 Type One Piece Female Twist-On Field Installable



BULK	CABLE TYPE	PACKAGED
27-9004	RG-59&62	27-9004P

BULK	CABLE TYPE	PACKAGED
27-9056	RG-59&62	27-9056P
27-9057	RG 59-62 TFE	27-9057P
27-9036	RG-58	27-9036P
27-9037	Belden 8281	27-9037P
27-9038	RG-6	27-9038P

BULK	CABLE TYPE	PACKAGED
27-9003	RG-59&62	27-9003P
27-9013	RG-6	27-9013P
27-9014	RG-58	27-9014P
27-9015	RG 59&62 TFE	27-9015P
27-9016	Belden 8281	27-9016P
27-9253	RG 58TFE	27-9253P

BULK	CABLE TYPE	PACKAGED
27-9053	RG-59&62	27-9053P
27-9031	RG-58	27-9031P
27-9032	RG-6	27-9032P
27-9033	RG 59&62 TFE	27-9033P
27-9034	Belden 8281	27-9034P
27-9230	RG 58TFE	27-9230P

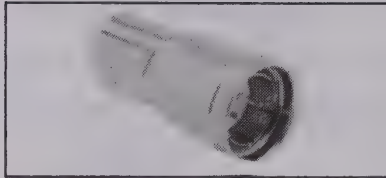
"P" Indicates Blister Packed for Peg-Board Display

(N) - Indicates New

BE SURE TO WATCH FOR OUR "POWER SOURCE" BROCHURES.



Twin-Ax



Male Connector (Gold Pins)

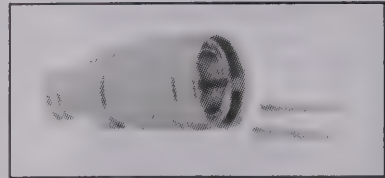
27-9080 For PVC **27-9080P**
27-9087 For Teflon **27-9087P**
27-9283 Cable od .250 **27-9283P**

27-9098



Female Connector For PVC
Twin Ax Cable (Gold Contacts)
27-9098P (Packaged)

27-9097



Male Crimp On
For PVC Twin Ax Cable (Gold Pins)
27-9097P (Packaged)

27-9481

NEW



TWIN-AX Insulated Splice
Female / Female
27-9481P (Packaged)

27-9081



Female Inline Splice Gold Contacts
27-9081P (Packaged)

27-9083



Female Inline Splice or Feed Thru w/nut &
washer - Gold Contacts 3/4" Diameter
27-9083P (Packaged)

27-9082

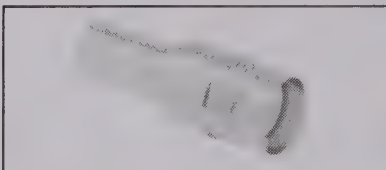


Chassis Mount or Receptacle
Gold Contacts 3/4" Diameter
27-9082P (Packaged)

27-9290
27-9291

100 ohms
150 ohms

27-9290P
27-9291P



Female Terminator
Gold Contact Pins

27-9086
27-9250

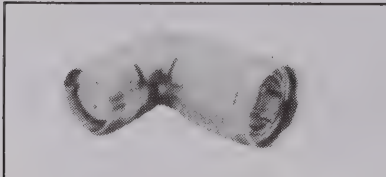
100 ohms
150 ohms

27-9086P
27-9250P



Male Terminator
Gold Contact Pins

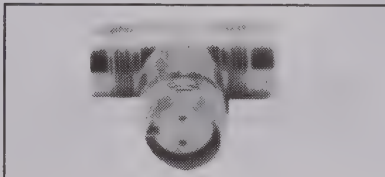
27-9084



Right Angle Adaptor - Female to Male
27-9084P (Packaged)

27-9085

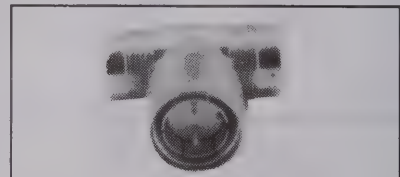
"T" Adaptor



Gold Contacts All Female
27-9085P (Packaged)

27-9099

"T" Adaptor

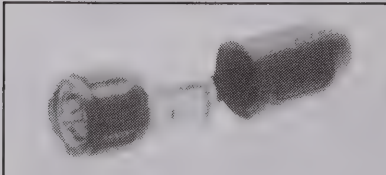


Gold Contacts - 1 Male - 2 Female
27-9099P (Packaged)

27-9480

NEW

27-9480P

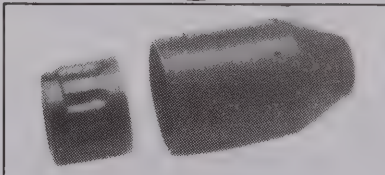


TWIN-AX Insulated Male Plug

25-7961

NEW

25-7961P



TWIN-AX Boot & Hood
Without Connector

27-9292

NEW

27-9292P



TWIN-AX Female Right
Angle Chassis Mount

NEED VALUE-ADDED SERVICES?
CALL US FOR INFORMATION.



"F" SERIES CONNECTORS, SPLICES, MOUNTS, ADAPTORS

"F" 59 Series (for RG-59, 62)

	Bulk #	Package #
	25-7000 (F-59) with separate 1/8" ring	25-7000P (5 per pack)
	25-7010 (F-59) with separate 1/4" ring	25-7010P (5 per pack)
	25-7020 (F-59) with separate 1/2" ring	25-7020P (5 per pack)
	25-7035 F crimp plug Thin Cable RG-59, 62 Teflon	25-7035P (5 per pack)
	25-7050 (F-59A) with attached 1/8" ring	25-7050P (5 per pack)
	25-7030 (F-59ALM) for standard RG-59 Cable	25-7030P (5 per pack)
	25-7031 (F-59ALX) for Tri-Shield	25-7031P (5 per pack)
	25-7049 for Teflon/Plenum RG-59 Cable	25-7049P (5 per pack)
	25-7146 (F-59R) right angle crimp on	25-7146P (2 per pack)
	25-7070 (F-59G) push on "F" connector	25-7070P (2 per pack)
	25-7080 (F-59PG) push on "F" Connector with center pin	25-7080P (2 per pack)
	25-7100 (F-59T) 1/2 watt 5% terminator	25-7100P (2 per pack)
	25-7110 (CR-59) 1/8" O ring for F-59	25-7110P (10 per pack)
	25-7040 (CR-59) 1/4" O ring for F-59	25-7040P (10 per pack)
	25-7090 (CR-59) 1/2" O ring for F-59	25-7090P (10 per pack)
	25-7120 (F-59TW) twist on (no crimp)	25-7120P (2 per pack)
	25-7121 (F-59TW) deluxe 1/2" grip area (no crimp)	25-7121P (2 per pack)
	25-7142 (F-59TR) right angle twist on	25-7142P (2 per pack)
	25-7280 (F-59QD) twist on quick disconnect	25-7280P (2 per pack)
	25-7290 RCA Push On for 59 cable with 1/8" O ring	25-7290P (2 per pack)
	25-7690 Motorola Plug for 59 cable with 1/8" O ring	25-7690P (2 per pack)

"F" 56 Series (for RG-6)

	Bulk #	Package #
	25-7150 (F-56) with separate 1/4" ring	25-7150P (5 per pack)
	25-7151 (F-56) 1/4" O ring for F-56	25-7151P (10 per pack)
	25-7160 (F-56A) with attached 1/4" ring	25-7160P (5 per pack)
	25-7032 (F-56ALM) for standard RG-6 cable	25-7032P (5 per pack)
	25-7033 (F-56ALX) for Tri-Shield	25-7033P (5 per pack)
	25-7034 (F-56ALS) for RG-6 Quad Shield	25-7034P (5 per pack)
	25-7046 for Teflon/Plenum RG-6 Cable	25-7046P (5 per pack)
	25-7180 (F-56TW) twist on (no crimp)	25-7180P (2 per pack)

"F" 11 Series (for RG-11)

	Bulk #	Package #
	25-7190 (F-11) with separate 1/5" ring	25-7190P (5 per pack)
	25-7620 (F-11) 1/5" O ring for F-11	25-7620P (10 per pack)

In Line Splices

	Bulk #	Package #
	25-7200 (F-81) 3/4" inline splice	25-7200P (2 per pack)
	25-7201 (F-81K) with knurled center	25-7201P (2 per pack)
	25-7210 (F-81NW) 3/4" with nut & washer	25-7210P (2 per pack)
	25-7640 (F-71) double male splice	25-7640P (2 per pack)

Chassis Mounts

	Bulk #	Package #
	25-7650 (F-61PC) P.C. Board Adaptor	25-7650P (2 per pack)
	25-7610 F chassis mount weather sealed	25-7610P (2 per pack)
	25-7660 (F-61AD) chassis mount with nut/washer	25-7660P (2 per pack)
	25-7670 (F-61HD) chassis mounting 2 flat ends	25-7670P (2 per pack)
	25-7680 Nut & Washer for use with all AIM mounts/splices	25-7680P (5 Set per pack)

Standard Pack on All Bulk F Connectors - 100 per bag - Packaged Connectors - Pls Note - Sets Per Individual Pack



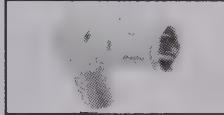
"F" SERIES ADAPTORS

25-7140



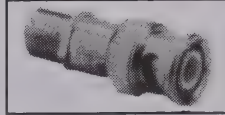
F Female to Push on F Male
25-7140P (2 Per Pack)

25-7141



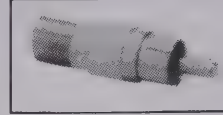
Rt. Angle F Female to Push on F Male
25-7141P (2 Per Pack)

25-7500



F Female to BNC Male
25-7500P (2 Per Pack)

25-7530



F Female to RCA Male
25-7530P (2 Per Pack)

25-7540



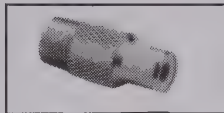
F Female to 3.5 MM Male
25-7540P (2 Per Pack)

25-7550



F Female to UHF Male
25-7550P (2 Per Pack)

25-7570



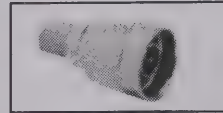
F Female to RCA Female
25-7570P (2 Per Pack)

25-7600



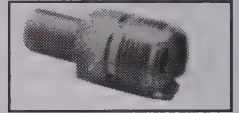
Rt. Angle F Female to F Male
25-7600P (2 Per Pack)

26-8020



F Female to N Male
26-8020P

25-7361



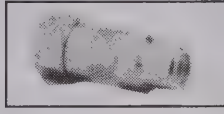
F Female to UHF Female
25-7361P (2 Per Pack)

25-7901



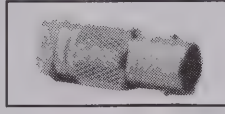
F Female to F Male
Voltage Blocking Coupler
25-7901P (2 Per Pack)

25-7580



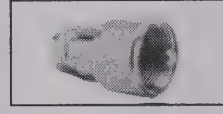
F Male to RCA Female
25-7580P (2 Per Pack)

27-8100



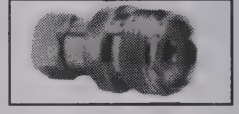
F Male to BNC Female
27-8100P (2 Per Pack)

25-7364



F Male to UHF Male
25-7364P (2 Per Pack)

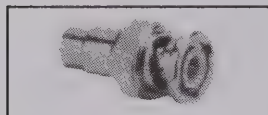
27-8200



F Male to UHF Female
27-8200P (2 Per Pack)

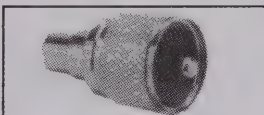
RCA SERIES ADAPTORS

25-7510



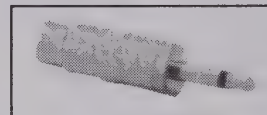
RCA Female to BNC Male
25-7510P (2 Per Pack)

25-7520



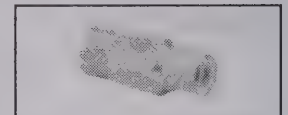
RCA Female to UHF Male
25-7520P (2 Per Pack)

25-7560



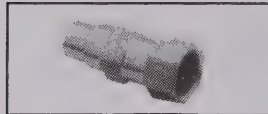
RCA Female to 3.5 mm Male
25-7560P (2 Per Pack)

25-7570



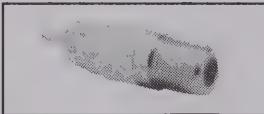
RCA Female to F Female
25-7570P (2 Per Pack)

25-7580



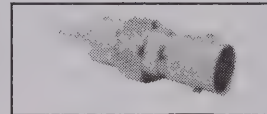
RCA Female to F Male
25-7580P (2 Per Pack)

25-7530



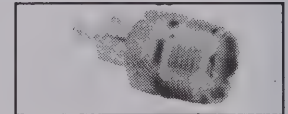
RCA Male to F Female
25-7530P (2 Per Pack)

27-8110



RCA Male to BNC Female
27-8110P (2 Per Pack)

27-8210

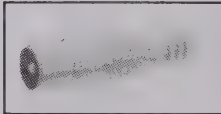


RCA Male to UHF Female
27-8210P (2 Per Pack)

EUROPEAN TYPES

25-2256 RG-6
25-2259 RG-59, 62

NEW



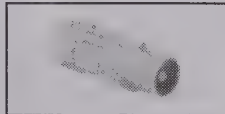
European Crimp Plug
25-2256P (2 Per Pack)
25-2259P (2 Per Pack)

25-2200



F Jack to European Plug
25-2200P (2 Per Pack)

25-2201



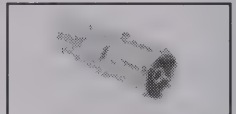
F Plug to European Plug
25-2201P (2 Per Pack)
Pack)

25-2202



F Plug to European Jack
25-2202P (2 Per Pack)

25-2203



F Jack to European Jack
25-2203P (2 Per Pack)

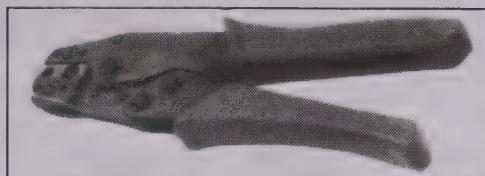
"P" Indicates Blister Packed for Peg-Board Display



RATCHET CRIMP TOOLS

AIM PROFESSIONAL RATCHET CRIMP TOOLS

- Full Cycle Ratchet Mechanism
- Quick Release Safety
- Perform Both Electrical and Mechanical Crimp
- High Quality Steel
- Each Tool Comes Complete with Crimp Die



3

CABLE SIZE	DESCRIPTION	HEX	HEX	CON-TACT	CONNECTORS	DIE STOCK #	TOOL STOCK #
RG-58, RG-59 TFE	2 pc. BNC & TNC	.320	.211			99-DC-1	24-300
RG-59, 62	2 pc. BNC & TNC	.320	.250			99-DC-2	24-301
8281	2 pc. BNC & TNC	.350	.288			99-DC-3	24-302
RG-58 TFE	2 pc. BNC & TNC	.320	.200			99-DC-11	24-320
RG-6	2 pc. BNC & TNC	.385	.320			99-DC-5	24-321
RG-55, 58, 58 TFE, RG-59TFE, 62TFE, 141, 142, 223, 303, 400	3 pc. BNC, TNC Mini-UHF	.213		.060		99-MC-1	24-304
RG-59, 62, 8X, 140, 210, 450	3 pc. BNC, TNC Mini-UHF	.255		.060		99-MC-2	24-305
RG-122, -174, -179, 180, 187, 188, 195, 316, 8218, 34M	3 pc. BNC, TNC	.184		.060		99-MC-12	24-306
RG-6	3 pc. BNC, TNC	.380		.065		99-MC-5	24-322
8281	3 pc. BNC, TNC	.310		.065		99-MC-3	24-318
RG-58, 59, 8X, 450	N	.255	.210	.075		99-N-1	24-312
RG-8	N	.405		.110		99-N-8	24-313

AIM STANDARD RATCHET CRIMP TOOLS

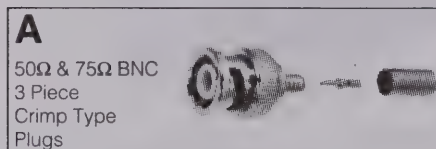
- Full Cycle Ratchet Mechanism
- Quick Release Safety
- Perform Both Electrical and Mechanical Crimp
- High Quality Steel
- Each Tool Is Attractively Blister Packed
- Each Tool Comes Complete with Crimp Die



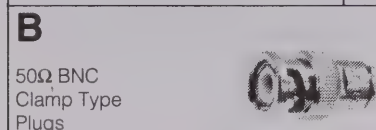
CABLE SIZE	DESCRIPTION	HEX	HEX	CON-TACT	CONNECTORS	DIE STOCK #	TOOL STOCK #
RG-58, RG-59 TFE	Crimps 2 pc. BNC & TNC Connectors	.320	.211			99-9858	24-9858P
RG-59, 62	Crimps 2 pc. BNC & TNC Connectors	.320	.250			99-9859	24-9859P
RG-58, 58 TFE, RG-141, RG-142, 223, 400, RG-303, RG-55, RG-59 TFE	Crimps 3 pc. BNC & TNC & Mini Connectors	.213		.060		99-9958	24-9958P
RG-59, 62, RG-450 Proflex RG-8X	Crimps 3 pc. BNC & TNC & Mini Connectors	.255		.060		99-9959	24-9959P
RG-122, 180, 34M RG-195, 8218 RG-174, 188, 316 RG-179, 187	Crimps 3 pc. BNC & TNC Connectors	.184		.060		99-9912	24-9912P

**CAN'T FIND THE EXACT PART YOU NEED?
CALL US FOR ASSISTANCE.**

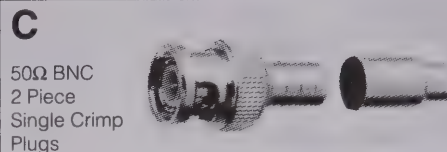
Amphenol® RFX BNC connectors are miniature bayonet-lock units. They are available in 50Ω and 75Ω types. The 50Ω type operates with low reflection DC-4 GHz on 50Ω cables and DC-500 MHz on 75 ohm cables. The 75Ω type operates DC-2 GHz on 75Ω cables.



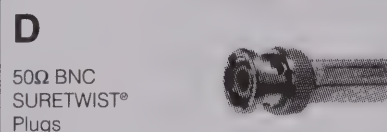
CABLES	CONNECTORS
RG-6	31-5558-RFX
RG-58	31-71000-RFX (75Ω)
Plenum 58	31-320-RFX
RG-59, 62	36650-3RFX
	31-321-RFX
RG-59 (20 AWG Ctr Cond.)	31-71008-RFX (75Ω)
Plenum 59, 62	68175-5-RFX
RG-174, 188, 316	68175-11RFX
	31-315-RFX
RG-179, 187	31-242-RFX
	31-71013-RFX (75Ω)
Belden 8281	31-321-10RFX



CABLES	CONNECTORS
RG-8, 213, 214	6775-RFX
RG-58	31-2-RFX (UG-88)
RG-59, 62	31-212-RFX (UG-260B)



CABLES	CONNECTORS
RG-58	31-5557-RFX
Plenum 58	31-5559-RFX
RG-59, 62	31-5556-RFX
Plenum 59, 62	31-5560-RFX



CABLES	CONNECTORS
RG-58	31-5137-RFX
RG-59, 62	31-5136-RFX



CABLES	CONNECTORS
RG-59, 62	31-4541-RFX (IBM ref 1836444)

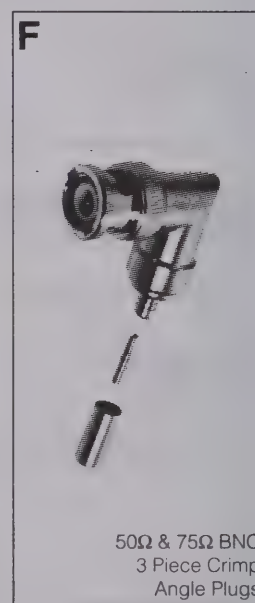
RFX 50Ω & 75Ω BNC PLUGS • 2 stud bayonet mating • male contacts

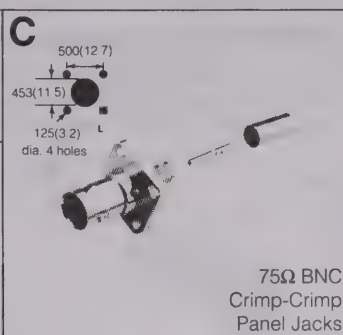
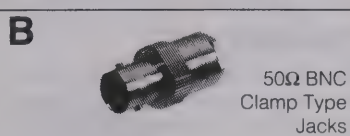
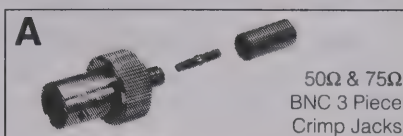
Cable RG-U	Cable Attachment		Notes		RFX Tool No	Fig	Amphenol RFX Number	UG Ref. Number‡	List Price			
	Outer	Inner	Other	IMP					10/24	25/99	100/499	500/999
6	Crimp	Crimp	3 pc	50Ω	CTL-2	A	31-5558-RFX	—	1.73	1.35	1.10	0.95
				75Ω	CTL-2	A	31-71000-RFX	—	2.91	2.27	1.86	1.60
8,213,214	Clamp	Solder	—	50Ω	—	B	6775-RFX	UG-959	7.46	5.82	4.76	4.10
58,141,142	Crimp	Crimp	3 pc	50Ω	CTL-1	A	31-320-RFX	—	1.55	1.21	0.99	0.85
	Crimp	Press Fit	2 pc	50Ω	CTL-2	C	31-5557-RFX	—	2.07	1.62	1.32	1.14
	Clamp	Solder	—	50Ω	—	B	31-2-RFX	UG-88	1.73	1.35	1.10	0.95
	SURETWIST®		1 pc	50Ω	—	D	31-5137-RFX	—	1.55	1.21	0.99	0.85
Plenum 58	Crimp	Crimp	3 pc	50Ω	CTL-1	A	36650-3RFX	—	2.09	1.63	1.33	1.15
	Crimp	Press Fit	2 pc	50Ω	CTL-2	C	31-5559-RFX	—	2.51	1.96	1.60	1.38
59, 62	Crimp	Crimp	3 pc	50Ω	CTL-1	A	31-321-RFX	—	1.55	1.21	0.99	0.85
				75Ω	CTL-1	C	31-71008-RFX	—	2.73	2.13	1.74	1.50
	Crimp	Press Fit	2 pc	50Ω	CTL-2	C	31-5556-RFX	—	2.07	1.62	1.32	1.14
	Clamp	Solder	—	50Ω	—	B	31-212-RFX	UG-260B	1.73	1.35	1.10	0.95
	SURETWIST®		1 pc	50Ω	—	D	31-5136-RFX	—	1.55	1.21	0.99	0.85
	QUICKTRIM®		—	50Ω	—	E	31-4541-RFX*	—	3.71	2.89	2.36	2.04
59▼	Crimp	Crimp	3 pc	50Ω	CTL-1	A	68175-5RFX	—	1.69	1.32	1.08	0.93
	Crimp	Crimp	3 pc	50Ω	CTL-1	A	68175-11RFX	—	2.09	1.63	1.33	1.15
Plenum 59, 62	Crimp	Press Fit	2 pc	50Ω	CTL-2	C	31-5560-RFX	—	2.51	1.96	1.60	1.38
	Crimp	Crimp	3 pc	50Ω	CTL-2	A	31-315-RFX	—	2.09	1.63	1.33	1.15
174, 188, 316	Crimp	Crimp	3 pc	50Ω	CTL-2	A	31-315-RFX	—	2.09	1.63	1.33	1.15
179, 187	Crimp	Crimp	3 pc	50Ω	CTL-2	A	31-242-RFX	—	2.73	2.13	1.74	1.50
				75Ω	CTL-2	A	31-71013-RFX	—	2.38	1.86	1.52	1.31
Belden 8281	Crimp	Crimp	3 pc	50Ω	CTL-2	A	31-321-10RFX	—	2.09	1.63	1.33	1.15

RFX 50Ω & 75Ω BNC ANGLE PLUGS • 2 stud bayonet mating • male contacts

Cable RG-U	Cable Attachment		Notes		RFX Tool No	Fig	Amphenol RFX Number	UG Ref. Number‡	List Price			
	Outer	Inner	Other	IMP					10/24	25/99	100/499	500/999
58, 141, 142	Crimp	Crimp	3 pc	50Ω	CTL-1	F	31-335-RFX	—	Contact your distributor for price			
59, 62	Crimp	Crimp	3 pc	50Ω	CTL-1	F	31-336-RFX	—	3.24	2.53	2.06	1.78
				75Ω	CTL-1	F	31-71010-RFX	—	4.85	3.79	3.09	2.67

▼ (20 AWG Ctr Cond) * IBM 1836444; WANG 350-2075 ‡ For reference only. RFX™ connectors for commercial use only.



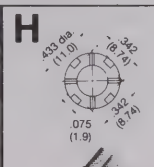
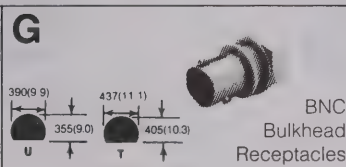
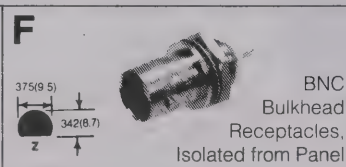
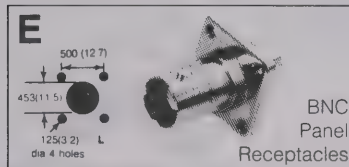
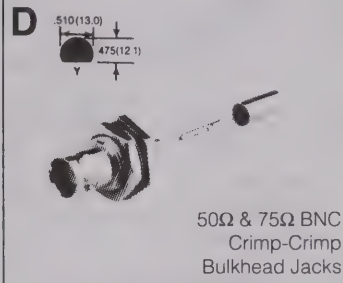


RFX 50Ω & 75Ω BNC CABLE JACKS • 2 stud bayonet mating • female contacts

Cable RG/U	Cable Attachment		IMP	RFX Tool No	Fig	Amphenol RFX Number	UG Ref Number†	List Price			
	Outer	Inner						10/24	25/99	100/499	500/999
58, 141, 142	Crimp	Crimp	50Ω	CTL-1	A	36800-RFX	—	4.02	3.14	2.56	2.21
	Clamp	Solder	50Ω	—	B	31-5-RFX	UG-89B	4.28	3.34	2.73	2.35
59, 62, 140, 210	Crimp	Crimp	75Ω	CTL-1	A	31-71009-RFX	—	2.39	1.86	1.52	1.31
	Clamp	Solder	50Ω	—	B	31-15-RFX	UG-261B	4.50	3.51	2.87	2.47
179, 187	Crimp	Crimp	75Ω	CTL-2	A	31-71014-RFX	—	2.38	1.86	1.52	1.31

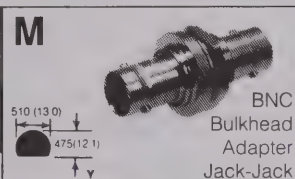
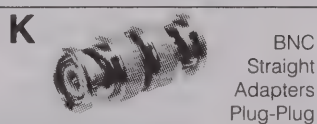
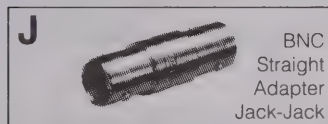
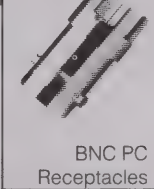
RFX BNC PANEL & BULKHEAD JACKS • 50Ω & 75Ω • 2 stud bayonet mating • female contacts

Cable RG/U	Conn. Type	Cable Attach.		IMP	MTG Hole	RFX Tool No	Fig	Amphenol RFX Number	List Price			
		Outer	Inner						10/24	25/99	100/499	500/999
58, 141, 142	Bulkh Jack	Crimp	Crimp	50Ω	Y	CTL-1	D	31-342-RFX	3.19	2.49	2.03	1.75
	Panel Jack	Crimp	Crimp	75Ω	L	CTL-1	C	31-71012-RFX	2.80	2.18	1.78	1.54
59, 62, 140, 210	Bulkh Jack	Crimp	Crimp	50Ω	Y	CTL-1	D	31-343-RFX	4.11	3.21	2.62	2.26
	Bulkh Jack	Crimp	Crimp	75Ω	Y	CTL-1	D	31-71011-RFX	3.13	2.44	1.99	1.72
174, 188, 316	Bulkh Jack	Crimp	Crimp	50Ω	Y	CTL-2	D	31-318-RFX	2.09	1.63	1.33	1.15
	Panel Jack	Crimp	Crimp	75Ω	L	CTL-2	C	31-71017-RFX	3.17	2.47	2.02	1.74
179, 187	Bulkh Jack	Crimp	Crimp	50Ω	Y	CTL-2	D	31-245-RFX	2.09	1.63	1.33	1.15
	Bulkh Jack	Crimp	Crimp	75Ω	Y	CTL-2	D	31-71016-RFX	3.42	2.67	2.18	1.88



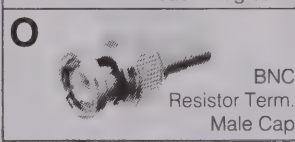
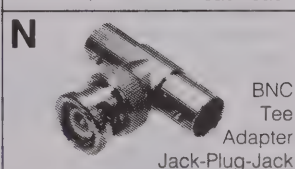
RFX BNC PANEL & BULKHEAD RECEPTACLES • 50Ω & 75Ω • 2-stud bayonet mating • female contacts

Description	Terminal Type	IMP	MTG Hole	Fig	Amphenol RFX Number	UG Ref. Number†	List Price			
							10/24	25/99	100/499	500/999
Panel Receptacle 4 hole .687"(17.5mm) Square Flange, Front or Rear Mount	Solder Cup	50Ω	L	E	31-203-RFX	UG-290A	2.18	1.70	1.39	1.20
Bulkhead Receptacle, Front Mount, Isolated From Panel, White Molded Thermoplastic Ins.	Solder Cup, Ground Tab	50Ω	Z	F	31-10-RFX▼	—	2.91	2.27	1.86	1.60
		75Ω	Z	F	31-10-75RFX▼	—	2.91	2.27	1.86	1.60
Bulkhead Receptacle, Front Mount, .125"(3.2mm) max. panel	Solder Cup	50Ω	U	G	31-221-RFX*	UG-1094	1.35	1.05	0.86	0.74
		75Ω	U	G	31-221-75RFX	—	2.02	1.58	1.29	1.11
		50Ω	T	G	31-236-RFX	UG-625B	2.00	1.56	1.28	1.10
		50Ω	F	H	31-5329-51RFX	—	Contact your distributor for price			
PC Receptacle (Jack) Post Terminal/Four Legs	Blunt Post	50Ω	F	H	31-5329-52RFX	—	Contact your distributor for price			
		75Ω	F	H	31-5329-71RFX	—	Contact your distributor for price			
		75Ω	F	H	31-5329-72RFX	—	Contact your distributor for price			
Lug used Inside Panel on Front Mount Bulk Receptacles for Ground Wire to Circuit	—	—	—	I	31-10152-RFX	—	0.46	0.36	0.29	0.25



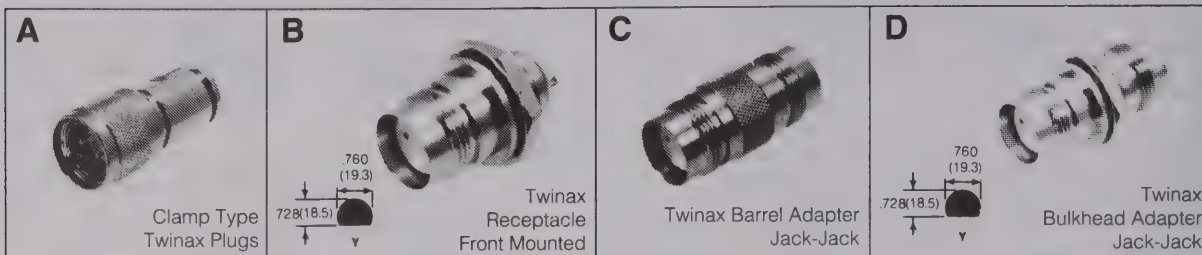
RFX BNC ADAPTERS & RESISTOR TERMINATED CAPS

Description		IMP	MTG Hole	Fig	Amphenol RFX Number.	UG Ref. Number‡	List Price			
							10/24	25/99	100/499	500/999
Straight	Jack-Jack	50Ω	—	J	31-219-RFX	UG-914	2.00	1.56	1.28	1.10
Straight	Plug-Plug	50Ω	—	K	31-218-RFX	UG-491A	6.29	4.91	4.01	3.46
	Plug-Plug	75Ω	—	K	31-218-75RFX	—	Contact your distributor for price			
Angle	Jack-Plug	50Ω	—	L	31-9-RFX▲	UG-306	4.46	3.48	2.84	2.45
Bulkhead, Gasketed	Jack-Jack	50Ω	Y	M	31-220G-RFX	—	4.82	3.76	3.07	2.65
Bulkhead, Not Gasketed	Jack-Jack	50Ω	Y	M	31-220N-RFX	—	4.10	3.19	2.61	2.25
	Jack-Jack	75Ω	—	M	31-220N-75RFX	—	4.91	3.83	3.13	2.70
Tee	Jack-Plug-Jack	50Ω	—	N	31-208-RFX	UG-274A	4.46	3.48	2.84	2.45
Male Cap,		50Ω	—	O	46650-51RFX	—	2.88	2.24	1.83	1.58
Resistor Terminated,		75Ω	—	O	46650-75RFX	—	2.88	2.24	1.83	1.58
5% 1 watt		93Ω	—	O	46650-93RFX	—	2.88	2.24	1.83	1.58

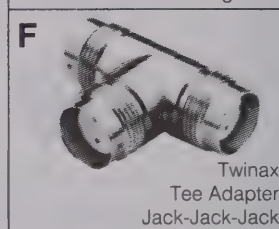
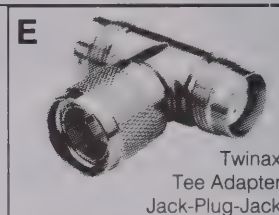


RFX™ TWIN contact connectors

Amphenol Keyed 90° 3/4-20 thread Twinax connectors are used principally in system 3X/400 applications for balanced line high sensitivity circuits. Normally used on 100Ω twinaxial cable, these units operate DC-200 MHz with a voltage rating of 500 V peak.



Description/ Cable		Cable Attachment		MTG Hole	Fig	Amphenol RFX Number	IBM Ref. Number	List Price			
		Outer	Inner					10/24	25/99	100/499	500/999
Times AA-6026, AA6076, AA-6079 Brand Rex T8756A Belden 8227, 9207 IBM 7362211	Plug	Clamp	Solder or Crimp with CTL-4	—	A	82-5589-RFX	7362229	5.92	4.62	3.77	3.25
Receptacle, Front Mount Solder Cup Terminals		—	—	Y	B	82-5590-RFX	7362179	8.19	6.39	5.22	4.50
Barrel Adapter Jack - Jack		—	—	—	C	82-5588-RFX	7362230	5.92	4.62	3.77	3.25
Bulkhead Adapter Jack - Jack		—	—	Y	D	7925-RFX	7369083	7.46	5.82	4.76	4.10
Tee Adapter Jack - Plug - Jack		—	—	—	E	26850-RFX	4178269	14.85	11.59	9.47	8.16
Tee Adapter Jack - Jack - Jack		—	—	—	F	82-5677-RFX	6851167	11.83	9.23	7.54	6.50



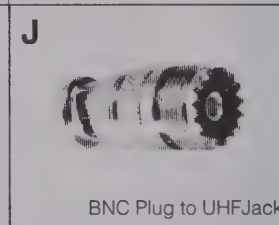
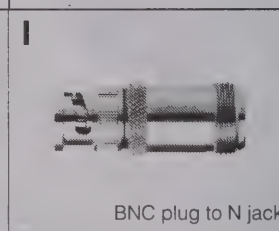
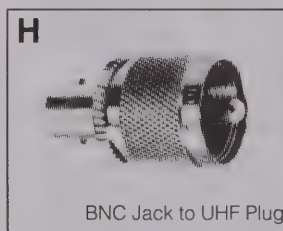
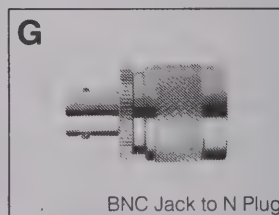
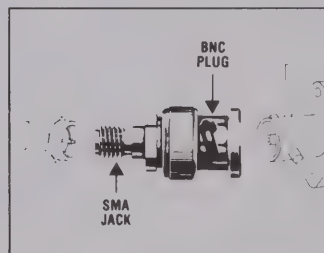
RFX™ between series adapters

Application Notes

Amphenol Between Series Adapters are used to join two incompatible series. When a single connector series is involved, the adapters are called "In-Series" and are described on the page dealing with that series. The adapters shown here provide a transition from one connector series to another.

It is necessary to be very explicit about the adapter ends. Some people describe an adapter by designating with what it is to mate, such as an adapter for two plugs. This is not an adapter with two male or plug ends, but just the opposite. . . an adapter with two female or jack ends.

We prefer to describe an adapter by referring to its own construction. We indicate the specific series involved and the mating configuration of each end of the adapter required. . . SMA jack to BNC plug, for instance. One end of the adapter is an SMA jack. The other end is a BNC plug. The fact that it joins an SMA plug to a BNC jack is understood.



Adapter Ends*		Fig.	Amphenol RFX Number	UG Ref. Number ‡	List Price			
					10/24	25/99	100/499	500/999
BNC Jack	N Plug	G	31-216-RFX	UG-201A/U	7.64	5.72	4.26	3.57
BNC Jack	UHF Plug	H	31-28-RFX	UG-273/U	6.36	4.96	4.05	3.50
BNC Plug	N Jack	I	31-217-RFX	UG-349A/U	6.37	4.97	4.06	3.50
BNC Plug	UHF Jack	J	2900-RFX	UG-255/U	6.48	5.06	4.13	3.56

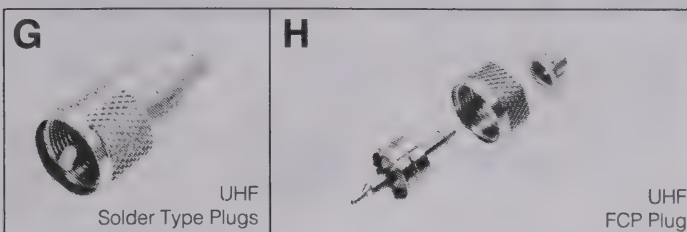
‡ for reference only. RFX™ connectors are for commercial use only.

RFX UHF coaxial connectors

Amphenol® UHF connectors are low cost general purpose units designed to operate satisfactorily DC to 300 MHz with voltage rating of 500 V peak.

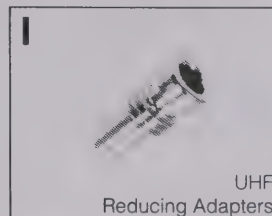
RFX UHF CABLE PLUGS • male contacts

Cable RG-/U	Cable Attachment		Construction Notes	Fig	Amphenol RFX Number	Mil. Ref. Number‡	List Price			
	Outer	Inner					10/24	25/99	100/499	500/999
8, 9, 11, 13, 63, 87A, 149, 213, 214, 216, 225	Solder	Solder	IBM 460147	G	83-1SP-15RFX	PL-259	1.37	1.07	0.87	0.75
	Solder	Solder	TFE Insulation	G	83-822-RFX	PL-259	2.51	1.96	1.60	1.38
58, 141, 142	FCP	Pliers	No Soldering	H	83-58FCP-RFX	—	1.82	1.42	1.16	1.00



RFX REDUCING ADAPTERS • for use in P/Ns 83-1SP-15RFX, 83-822-RFX – adapts plugs to smaller cables

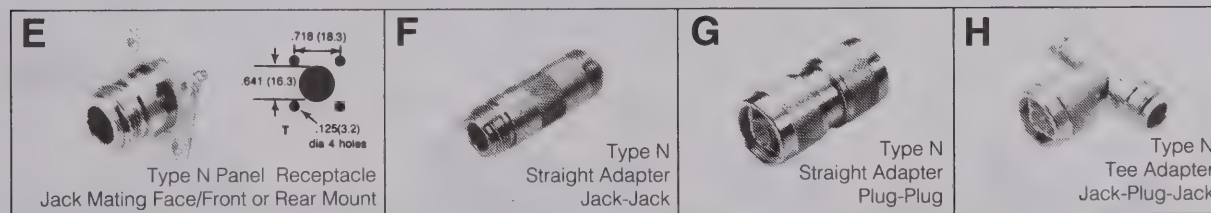
Description	Fig.	Amphenol RFX Number	UG Ref. Number‡	List Price			
				10/24	25/99	100/499	500/999
For use on RG-58, 141, 142 Cable	I	83-185-RFX	UG-175	0.33	0.26	0.21	0.18
For use on RG-59, 62, 71, 140, 210 Cable	I	83-168-RFX	UG-176	0.33	0.26	0.21	0.18



RFX UHF RECEPTACLES & ADAPTERS • female contacts

Description	Terminal Type	MTG Hole	Fig	Amphenol RFX Number	Mil. Ref. Number‡	List Price			
						10/24	25/99	100/499	500/999
4-hole Square Flange Panel Type (J)	Solder Cup	X	J	83-1R-RFX★	SO-239	1.58	1.23	1.01	0.87
Rear Mount Bulkhead Type (J)	Solder Cup	V	K	83-878-RFX	—	2.11	1.65	1.35	1.16
Straight Adapter Jack-Jack	—	—	L	83-1J-RFX	PL-258	2.56	2.00	1.63	1.41

‡ for reference only. RFX™ connectors are for commercial use only. ★ IBM ref. 317228



RFX Type N PANEL RECEPTACLES

Description	Terminal Type	Fig.	Amphenol RFX Number	UG Ref. Number‡	List Price			
					10/24	25/99	100/499	500/999
4-hole Sq. Flange panel Receptacle	Solder Cup	E	82-97-RFX	UG-58A	2.64	2.43	1.68	1.45

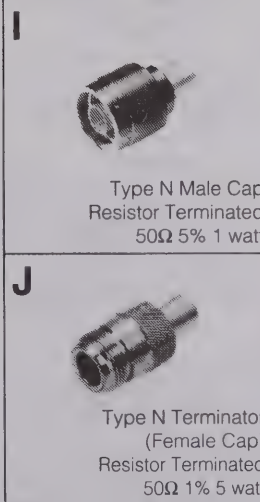
RFX Type N ADAPTERS

Adapter Ends	Description	Fig.	Amphenol RFX Number	UG Ref. Number‡	List Price			
					10/24	25/99	100/499	500/999
Jack-Jack	Straight	F	82-101-RFX	UG-29B	2.77	2.11	1.76	1.52
Plug-Plug	Straight	G	82-100-RFX	UG-57B	4.25	3.32	2.71	2.34
Jack-Plug-Jack	Tee	H	82-102-RFX	UG-107B	10.57	8.25	6.74	5.81

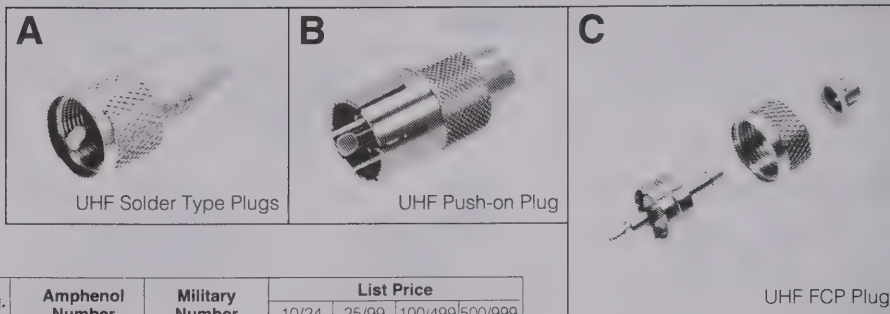
RFX Type N RESISTOR TERMINATED CAPS

Description	Fig.	Amphenol RFX Number	UG Ref. Number‡	List Price			
				10/24	25/99	100/499	500/999
Male Cap. RT 50Ω 5% 1 watt	I	82-5722-RFX	—	6.37	4.97	4.06	3.50
Female Cap. RT 50Ω 5% 1 watt	J	82-5721-10RFX	—	6.37	4.97	4.06	3.50

† Ethernet = Zerox Trademark ‡ for reference only. RFX™ connectors are for commercial use only. ▼ 75Ω Impedance.



Amphenol® UHF connectors are low cost general purpose units designed to operate satisfactorily DC to 300 MHz with voltage rating of 500 V peak.

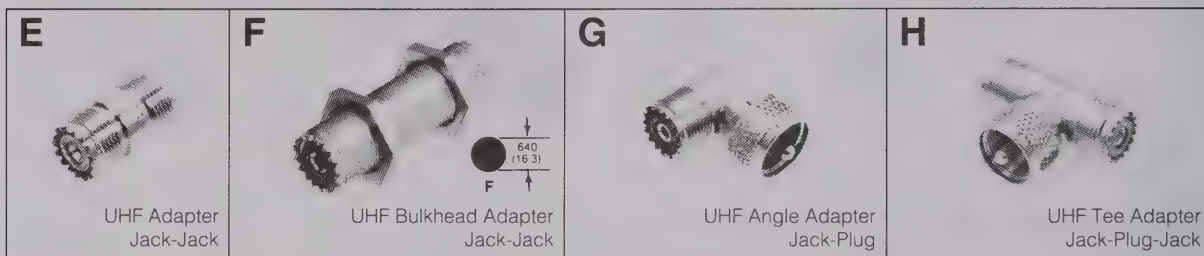


UHF PLUGS • male contacts

Cable RG-/U	Cable Attachment		Fig.	Amphenol Number	Military Number	List Price			
	Outer	Inner				10/24	25/99	100/499	500/999
8, 9, 11, 13, 63, 87A, 149, 213, 214, 216, 225	Solder	Solder	A	83-1SP-1050	PL-259	1.84	1.57	1.12	0.86
	Solder	Solder		83-822	PL-259	3.01	2.25	1.68	1.41
	Solder	Solder	B	83-5SP	—	15.92	11.90	8.88	7.47
58, 141	FCP	Pliers	C	83-58FCP □	—	2.45	1.83	1.37	1.15

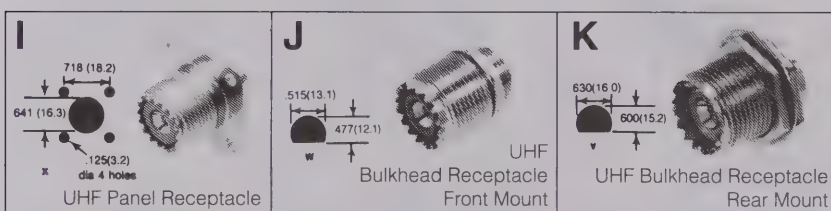
REDUCING ADAPTERS • for use in P/N's 83-1SP-1050, 83-822, 83-5SP - adapts to smaller cables

Description	Fig.	Amphenol Number	Military Number	List Price			
				10/24	25/99	100/499	500/999
For use on RG-55, 58, 141, 142 Cable (Except 55A)	D	83-185	UG-175	0.59	0.44	0.33	0.28
For use on RG-59, 62, 71, 140, 210 Cable		83-168	UG-176	0.66	0.49	0.37	0.31



UHF IN-SERIES ADAPTERS

Description		Fig.	Amphenol Number	Military Number	List Price			
					10/24	25/99	100/499	500/999
Straight	Jack-Jack	E	83-1J	PL-258	3.23	2.42	1.81	1.52
Bulkhead	Jack-Jack	F	83-1F	UG-363	9.77	7.30	5.45	4.58
Angle	Jack-Plug	G	83-1AP	UG-646	5.62	4.20	3.13	2.63
Tee	Jack-Plug-Jack	H	83-1T	M-358	7.99	5.98	4.46	3.75



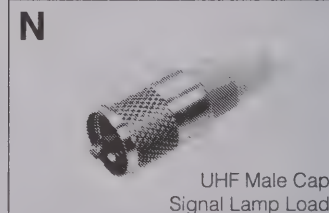
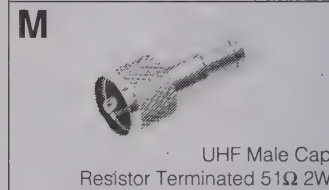
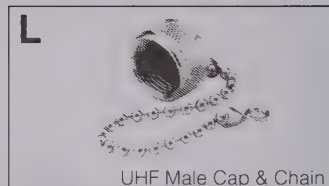
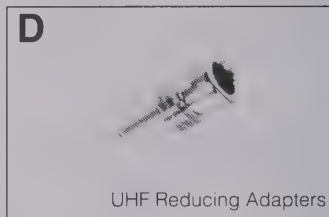
UHF RECEPTACLES • female contacts

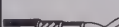
Description	Terminal Type	Fig.	Amphenol Number	Military Number	List Price			
					10/24	25/99	100/499	500/999
4-hole Sq. Flange Panel Type	Solder Cup	I	83-1R★	SO-239	1.90	1.43	1.06	0.89
Front Mount Bulkhead Type	Solder Cup	J	83-875-1002	—	4.61	3.45	2.57	2.16
Rear Mount Bulkhead Type	Solder Cup	K	83-878	—	2.53	1.90	1.42	1.19

UHF CAPS AND LOADS

Description	Fig.	Amphenol Number	List Price			
			10/24	25/99	100/499	500/999
Male Cap & Chain	L	83-1AC	6.60	4.93	3.68	3.10
Male Cap - Resistor Load - 51 ohms 2 watts	M	83-887	—	—	13.25	7.66
Male Cap - Signal Lamp Load	N	83-888	—	—	12.13	10.21
Hood/4-hole flange mt/Adapts 83-1R to ★	O	83-1H (UG-106)	3.25	2.44	1.82	1.53
Hood/4-hole flange mt/Adapts 83-1R to ▲	O	83-765 (UG-177)	1.94	1.45	1.08	0.91

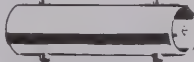
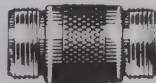
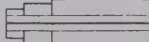
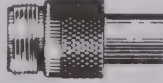
★ RG-8, 10, 11, 12, 63, 79, 115, 149, 213, 215 cables ▲ RG-58, 141 cables □ US patent 4,053,200 ★ IBM 317228



Plenum Cable Information			Connector Information						
Dims.	Cable Number	Cable Imp.	Type	Config.	Cable Attachment		Conn. Imp.	Amphenol Number	Crimp Tool
					Outer	Inner			
 OD .100 DOD .063 CC .012	RG-179 Plenum Belden 83264(FEP)	75Ω	BNC	Plug	Crimp	Crimp	50Ω	31-242	CTL-2
			BNC	Plug	Crimp	Crimp	50Ω	31-242-RFX	CTL-2
			75Ω BNC-T1	Plug	Crimp	Crimp	75Ω	31-70013	227-944 w/ 227-980-7
			75Ω BNC-T2	Plug	Crimp	Crimp	75Ω	31-71013	CTL-2
			75Ω BNC-T2	Plug	Crimp	Crimp	75Ω	31-71013-RFX	CTL-2
			75Ω BNC-T1	Angle Plug	Crimp	Crimp	75Ω	31-70015	227-944 w/ 227-980-2
			75Ω BNC-T1	Jack	Crimp	Crimp	75Ω	31-70014	227-944 w/ 227-980-2
			75Ω BNC-T2	Jack	Crimp	Crimp	75Ω	31-71014	CTL-2
			75Ω BNC-T2	Jack	Crimp	Crimp	75Ω	31-71014-RFX	CTL-2
			BNC	Bulkh. Jack	Crimp	Crimp	50Ω	31-245	CTL-2
			BNC	Bulkh. Jack	Crimp	Crimp	50Ω	31-245-RFX	CTL-2
			75Ω BNC-T1	Bulkh. Jack	Crimp	Crimp	75Ω	31-70016	227-944 w/ 227-980-2
			75Ω BNC-T2	Bulkh. Jack	Crimp	Crimp	75Ω	31-71016	CTL-2
			75Ω BNC-T2	Bulkh. Jack	Crimp	Crimp	75Ω	31-71016-RFX	CTL-2
			75Ω BNC-T1	Panel Jack	Crimp	Crimp	75Ω	31-70017	227-944 w/ 227-980-2
			75Ω BNC-T2	Panel Jack	Crimp	Crimp	75Ω	31-71017-RFX	CTL-2
			TNC	Plug	Crimp	Crimp	50Ω	31-2242-RFX	CTL-2
 OD .274 DOD .188 CC .032	Plenum Precision Video Belden 88281(TFE)	75Ω	BNC	Plug	Crimp	Crimp	50Ω	31-321-1000	CTL-2
			75Ω BNC-T2	Plug	Crimp	Crimp	75Ω	31-71032	CTL-1
			BNC	Plug	Suretwist		50Ω	31-5151	-
 OD .200 DOD .135 CC .032	Plenum Precision Video Gepco VPM 2000TK (Kynar)	75Ω	BNC	Plug	Crimp	Crimp	50Ω	68175-1011	CTL-1
			BNC	Plug	Crimp	Crimp	50Ω	68175-11RFX	CTL-1
			75Ω BNC-T2	Plug	Crimp	Crimp	75Ω	31-71035	CTL-1
			BNC	Plug	Suretwist		50Ω	31-5369	-
 OD .375 DOD .247 CC .086	Ethernet™ Plenum (IEEE 802.3 10 Base 5) Belden 89880(FEP) Malco 250-4314-0003(FEP) Phalo 036-001-80145(FEP) Times AA-4478(FEP)	50Ω	N	Plug	Crimp	Crimp	50Ω	82-4426-1001	CTL-3
			N	Plug	Crimp	Crimp	50Ω	82-4426-11RFX	CTL-3
			N	Jack	Crimp	Crimp	50Ω	82-4429-RFX	CTL-3
 OD .267 DOD .209 CC .037 2 Cond	Twinax Plenum Belden 89207(TFE)	100Ω	Twin	Plug	Clamp	Solder or Crimp	95Ω	82-5749	Crimp Confs w/ CTL-4
			Twin	Plug	Crimp	Crimp	95Ω	82-5589-CC	CTL-4

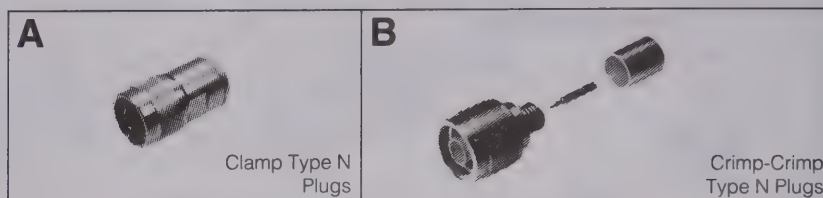
⌘ for use with solid center conductor cables only

network accessories

IEEE 802.3 10 base 2	BNC Barrel Adapter Jack-Jack  31-219 (UG-914)	BNC Bulkhead Adapter Jack-Jack  31-220N Max. Panel .181" 31-3220 Max. Panel .181"	BNC Tee Adapter Jack-Plug-Jack  31-208 (UG-274A)	BNC Terminator  46650-51 50Ω 5% 1W 46650-75 75Ω 5% 1W 46650-91 91Ω 5% 1W
IEEE 802.3 10 base 5	Type N Barrel Adapter  82-101 Silver Plated Contact 82-101-1000 Gold Plt. Contact	Between Series Adapter N Jack to BNC Plug (mates N plug to BNC jack)  31-217 (UG-349A)	Type N Boots  31-5010 Boot for cable splice  31-5011 Boot for Terminator	Type N Terminator 49.9Ω, 1% 1Watt  82-5721-1000 Gold Plt Contact

* Dimensions shown for commercial grade plenum cables are nominal.

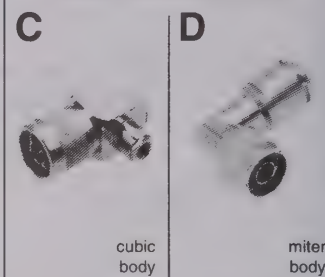
Amphenol® Type N connectors are 50 Ω medium size, weatherproof threaded coupling units designed for use DC-11GHz with a voltage rating of 1,500 V peak.



N CABLE PLUGS • male contacts

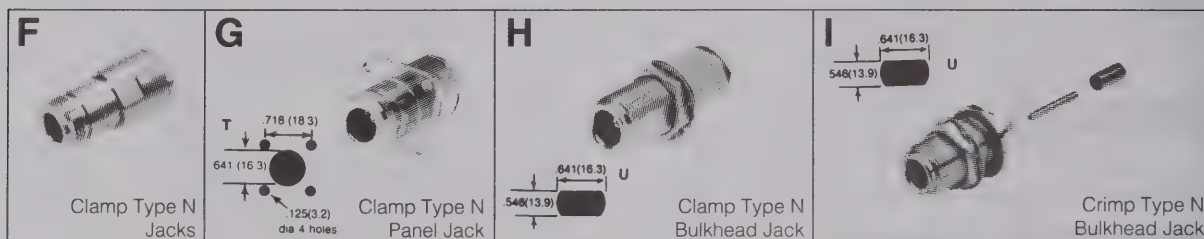
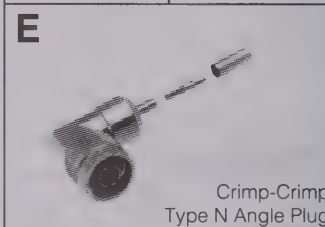
Cable RG-/U	Cable Attachment		Fig.	Amphenol Number	Military Number	List Price			
	Outer	Inner				10/24	25/99	100/499	500/999
8, 213	Crimp	Crimp	B	82-340	M39012/01B0007	7.69	5.46	4.28	3.43
8, 9, 144, 165, 213, 214, 216, 225	Clamp	Solder	A	82-202	UG-21D	5.41	3.84	3.02	2.42
				82-61	UG-21B	7.21	5.39	4.02	3.38
11, 149	Crimp	Crimp	B	82-342	M39012/01B0013	20.72	15.50	11.56	9.73
55, 142, 223	Crimp	Crimp	B	82-5370	—	8.78	6.57	4.89	4.12
				82-5375	—	9.70	7.25	5.41	4.55
58, 141	Clamp	Solder	A	34025	UG-536B	5.89	4.40	3.29	2.77
				34525	UG-603A	11.14	8.33	6.22	5.23
59,62,71,140,210	Clamp	Solder	A	214, 225, 393	M39012/01-0501	10.74	7.65	6.00	4.91
Ethernet Cables*	Crimp	Crimp	B	82-4425	—	8.80	6.27	4.90	4.04
Belden 9913	Clamp	Solder	A	82-4426-1001	—	6.88	5.14	3.83	3.23

Clamp Type N Angle Plugs



N ANGLE PLUGS • male contacts

Cable RG-/U	Cable Attachment		Fig.	Amphenol Number	Mil. No.	List Price			
	Outer	Inner				10/24	25/99	100/499	500/999
214, 225, 393	Crimp	Crimp	E	82-4440	—	20.16	14.33	11.25	9.01
8, 9, 87A, 144, 165, 213, 214, 216, 225	Clamp	Solder	D	82-835	—	—	—	38.73	22.38
55, 142, 223	Crimp	Crimp	E	82-5374	—	35.80	26.76	19.96	16.80
58, 141	Crimp	Crimp	E	82-5379	—	—	—	13.73	10.44
58, 141	Clamp	Solder	C	18750	—	19.26	14.40	10.74	9.04

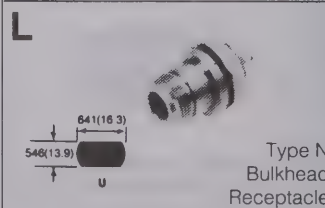
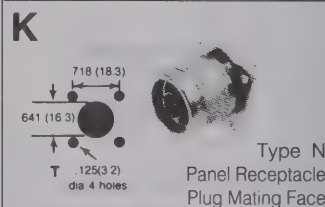
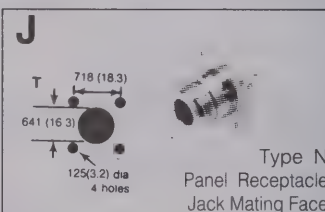


N STRAIGHT, PANEL, and BULKHEAD JACKS • female contacts

Cable RG-/U	Conn. Type	Cable Attachment		Fig.	Amphenol Number	Military Number	List Price			
		Outer	Inner				10/24	25/99	100/499	500/999
8, 9, 87A, 144, 165, 213, 214, 216, 225	Jack	Clamp	Solder	F	82-63	UG-23B	8.15	6.10	4.55	3.82
	Panel Jack	Clamp	Solder	G	82-62	UG-22B	10.22	7.65	5.70	4.80
	Bulkh Jack	Clamp	Solder	H	82-67	UG-160A	29.29	21.90	16.34	13.75
55, 142, 223	Bhd Jack	Crimp	Crimp	I	82-5373	—	18.26	13.65	10.19	8.57
58, 141	Jack	Clamp	Solder	F	35025	—	23.22	17.35	12.95	10.90
58, 141	Bhd Jack	Crimp	Crimp	I	82-5378	—	17.04	16.62	13.84	8.00
59,62,71, 140,210	Jack	Clamp	Solder	F	36500	UG-602	—	—	21.70	18.27

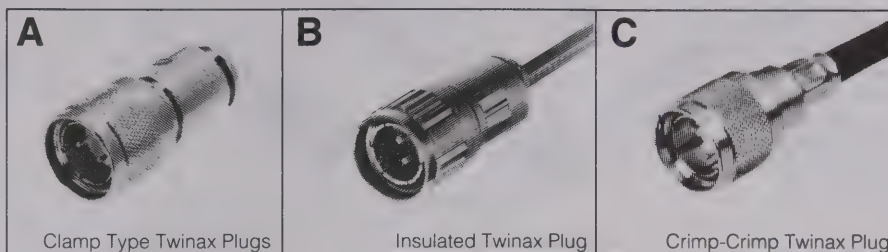
N RECEPTACLES

Description	Terminal Type	Fig.	Amphenol Number	Military Number	List Price			
					10/24	25/99	100/499	500/999
4-hole Square Flange Front or Rear Mount (J)	Solder Cup	J	82-97	UG-58A	4.32	2.79	2.42	1.75
4-hole Square Flange Front Mount (P)	Solder Cup	K	49000	—	13.58	10.15	7.58	6.38
Rear Mount, Pressurized w/Glass Seal, Gasketed (J)	Solder Cup	L	82-811	UG-680	14.28	10.68	7.97	6.70



*Times AA4478(FEP) AA4479(PVC); Belden 89880(FEP), 9880(PVC); Malco 250-4314-0003(FEP), 250-4315-0004(PVC); Phalo 036-001-80145(FEP), 036-001-05633(PVC) IBM 6028495

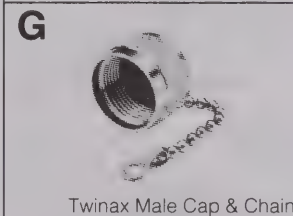
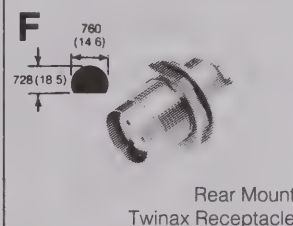
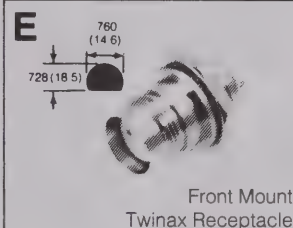
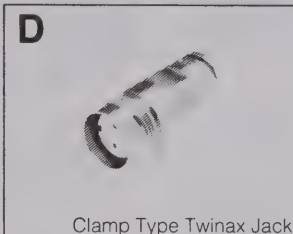
Amphenol® Keyed 90° 3/4-20 thread Twinax connectors are used principally in system 3X/400 applications for balanced line high sensitivity circuits. Normally used on 100Ω twinaxial cable, these units operate DC-200 MHz (usable to 500 MHz) with a voltage rating of 500 V peak.



KEYED 90° TWINAX CONNECTORS • twin contacts • 3/4-20 thread mating

Description/ Cable		Cable Attachment		Fig	IBM Ref. Number	Amphenol Number	List Price			
		Outer	Inner				10/24	25/99	100/499	500/999
Times AA-6026, AA6076, AA-6079 Brand Rex T8756A Belden 8227, 9207 IBM 7362211	Plug	Clamp	Solder or Crimp	A	7362229	82-5589	9.29	6.95	5.18	4.36
	Plug	Crimp	Crimp	C	—	82-5589-CC	9.74	7.28	5.43	4.57
	Plug	Clamp	Solder or Crimp	B	8113119	82-GB635-CR	8.36	6.26	4.66	3.93
	Jack	Clamp	Solder or Crimp	D	6838959	82-5591	Contact your distributor for price			
Plenum Twinax Belden 89207 Times AA-6077	Plug	Clamp	Solder or Crimp	A	7362064	82-5749	19.26	14.40	10.74	9.04
Receptacle, Front Mount,Solder Cup Terminals				E	7362179	82-5590	16.62	12.43	9.27	7.80
Receptacle, Rear Mount,Solder Cup Terminals				F	7364498	82-5646	Contact your distributor for price			
Male Cap & Chain				G	—	82-130	15.96	11.94	8.90	7.49
Package of 50 Male Contacts▲				N/I	—	82-10588	Price per bag 33.43			

▲ for 82-5589, 82-5589-CC, 82-5749

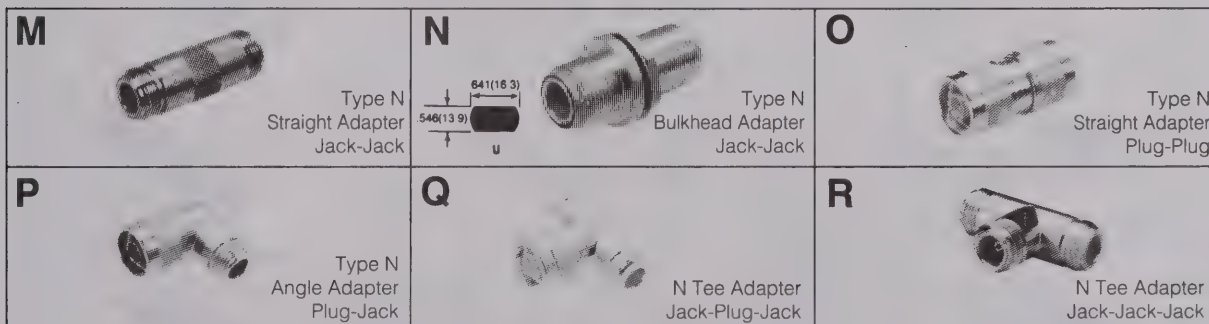


Type N coaxial connectors

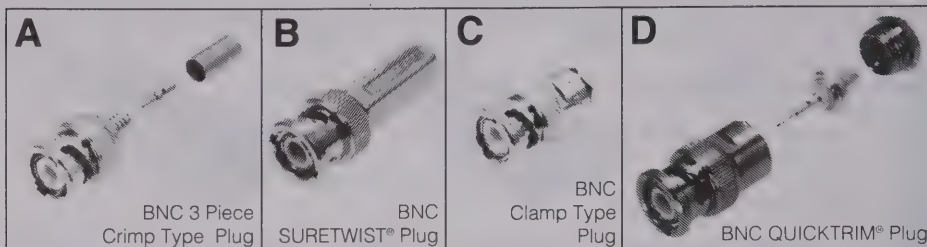
N ADAPTERS

Adapter Ends	Description	Fig.	Amphenol Number	Military Number	List Price			
					10/24	25/99	100/499	500/999
Jack-Jack	Straight	M	82-101*	UG-29B	6.66	4.27	3.72	2.97
			82-101-1000◆	UG-29B	8.69	8.48	7.06	4.08
Jack-Jack	Bulkhead	N	82-66	UG-30	18.08	13.52	10.08	8.49
Plug-Plug	Straight	O	82-100	UG-57B	8.17	6.11	4.56	3.83
Plug-Jack	Angle	P	82-64	UG-27A	19.60	14.65	10.93	9.19
Jack-Plug-Jack	Tee	Q	82-102	UG-107B	32.71	31.91	26.58	15.35
Jack-Jack-Jack	Tee	R	82-99	UG-28A	39.31	38.34	31.94	18.45

* Contact finish=silver ◆ Contact finish=gold



Amphenol® BNC connectors are miniature 50Ω units which operate with low reflection DC-4 GHz on 50Ω cables and DC-500 MHz on 75 ohm cables. The voltage rating is 500 V peak.



BNC PLUGS • 2 stud bayonet mating • 50Ω impedance

Cable RG-/U	Cable Attachment		Fig	Amphenol Number	Military Number	List Price			
	Outer	Inner				10/24	25/99	100/499	500/999
55, 58, 141, 142, 223, 400	Crimp	Crimp	A	31-320	M23329/3-01.3-03	4.13	3.08	2.30	1.94
				36775	—	4.24	3.16	2.36	1.99
	Clamp	Solder	C	31-4320	M39012/16-0013	4.56	3.42	2.54	2.14
				31-202	UG-88C	3.06	2.99	1.70	1.44
				31-2	UG-88	3.32	2.48	1.85	1.56
Plenum 58	Crimp	Crimp	A	31-5137▲	—	5.11	3.82	2.85	2.40
				36650-1003	—	3.84	2.88	2.14	1.80
	Crimp	Crimp	A	31-321	M23329/3-05	4.24	3.16	2.36	1.99
				68175	—	3.84	2.88	2.14	1.80
				68175-1004	—	3.94	2.94	2.19	1.85
59, 62, 140, 210	Crimp	Crimp	A	31-4321	M39012/16-0015	4.98	3.73	2.77	2.34
				31-212	UG-260B	3.17	3.09	1.76	1.49
	Clamp	Solder	C	31-5136▲	—	3.71	2.77	2.07	1.74
				31-4541	(IBM 1836444*)	4.96	3.70	2.76	2.33
				31-4541	(IBM 1836444*)	4.96	3.70	2.76	2.33
59 (20 AWG Ctr Cond)	Crimp	Crimp	A	68175-1005	—	4.39	3.28	2.45	2.06
Plenum 59, 62	Crimp	Crimp	A	68175-1011	—	3.84	2.88	2.14	1.80
				31-5369	—	4.13	3.08	2.30	1.94
122, Belden 8218	Crimp	Crimp	A	31-325	—	5.59	4.19	3.12	2.62
				84975	UG-1033	7.49	7.31	4.18	3.52
PL62 (IBM 4835584)	Clamp	Solder	C	31-5060	(IBM 4449035)	8.39	6.27	4.67	3.94
174, 188, 316	Crimp	Crimp	A	31-315	—	4.72	3.53	2.64	2.21
Dbl. Br. RG-316	Crimp	Crimp	A	31-315-1005	—	7.10	6.93	5.78	3.33
179, 187	Crimp	Crimp	A	31-242	—	5.78	4.32	3.22	2.72
Belden 8281, 88281	Crimp	Crimp	A	31-321-1000	—	4.79	3.58	2.67	2.24
Amphenol 21-1060-7	SURETWIST®	—	B	31-5151▼	—	4.72	3.53	2.64	2.21
Belden 8213				31-4411	—	46.37	45.23	37.67	21.76
Belden 9259	Crimp	Crimp	A	68175-1003	—	3.84	2.88	2.14	1.80
Belden 9268	QUICKTRIM®	—	D	31-4542	IBM 1836447	5.22	3.90	2.91	2.45
Belden 9907, 89907	Crimp	Crimp	A	31-320-1006	—	3.84	2.88	2.14	1.80

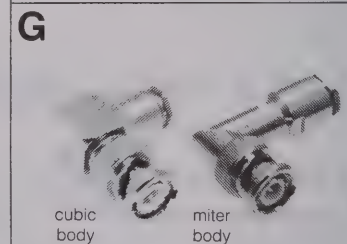
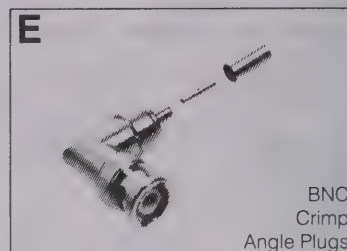
BNC ANGLE PLUGS • male contacts • 2 stud bayonet mating • TFE insulation

Cable RG-/U	Cable Attachment		Fig	Amphenol Number	Military Number	List Price			
	Outer	Inner				10/24	25/99	100/499	500/999
55, 58, 141, 142, 223, 400	Crimp	Crimp	E	31-335	—	19.13	14.31	10.67	8.98
				95600	—	27.60	20.64	15.39	12.96
	SURETWIST®	—	F	31-5153★	—	7.49	5.60	4.18	3.52
				31-204	UG-913	23.87	23.28	13.31	11.20
59, 62, 140, 210	Crimp	Crimp	E	31-336	—	15.50	11.59	8.65	7.28
				95625	—	25.62	19.16	14.29	12.02
	SURETWIST®	—	F	31-5154★	—	7.49	5.60	4.18	3.52
				8575	—	15.34	14.96	8.55	7.20
	Clamp	Solder	G	86225	—	—	—	19.69	16.56
Belden 8281	SURETWIST®	—	F	31-5155★	—	7.78	5.82	4.34	3.65
Amphenol 21-1060-7				31-5155★	—	7.78	5.82	4.34	3.65

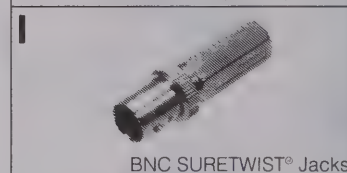
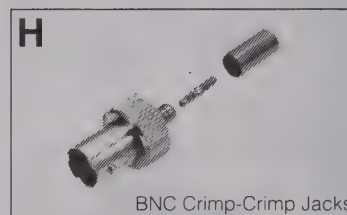
BNC CABLE JACKS • female contacts • 2 stud bayonet mating • TFE insulation

Cable RG-/U	Cable Attachment		Fig	Amphenol Number	Military Number	List Price			
	Outer	Inner				10/24	25/99	100/499	500/999
58, 141	Crimp	Crimp	H	36800	—	8.04	6.01	4.48	3.77
58, 141, 400	SURETWIST®	—	I	31-5139▲	—	4.18	3.12	2.33	1.96
55, 58, 141, 142, 223, 400				31-205	UG-89B	3.80	2.84	2.12	1.78
59, 62, 140, 210	Crimp	Crimp	H	68150	—	7.22	7.05	5.87	3.39
	SURETWIST®	—	I	31-5138▲	—	5.11	3.82	2.85	2.40
				31-215	UG-261B	6.50	4.86	3.63	3.05
59 (20AWG Ctr Cond)	Crimp	Crimp	H	68150-1002	—	7.22	7.05	5.87	3.39
Belden 8281	SURETWIST®	—	I	31-5152▲	—	4.72	3.53	2.64	2.21
Plenum 59				31-5370▲	—	11.10	10.82	9.01	5.21

▼ Noryl® GFN2 20% glass filled insulation ★ Noryl® GFN2 20% glass filled/Polypropylene ▲ 20% glass filled Polycarbonate/Polypropylene insulation * Wang 3502075



BNC Clamp Type Angle Plug



A

Isolated from Panel White Valox Housing Isolated from Panel Black Valox Housing Metal Housing

Standard BNC Printed Circuit Board Right Angle Bulkhead Receptacle

D

BNC PC Receptacles (Jack) Post Terminal, 3 Legs

B

Isolated from Panel White Valox Housing Isolated from Panel Black Valox Housing Metal Housing

Low Profile BNC Printed Circuit Board Right Angle Bulkhead Receptacle

E

BNC PC Receptacles (Jack) Post Terminal, 4 Legs

C

Isolated from Panel White Valox Housing Isolated from Panel Black Valox Housing Metal Housing

Vertical BNC Printed Circuit Board Bulkhead Receptacle

F

BNC PC Receptacle (Jack) Post Terminal, 4 Legs

BNC PRINTED CIRCUIT BOARD RECEPTACLES • 50Ω impedance

Description	Terminal Type	Notes	Fig.	Amphenol Number	List Price			
					10/24	25/99	100/499	500/999
Standard, Printed Circuit Angle Bulkhead Receptacle (J), Mount to Board w/Two Fork Pins	Blunt Posts for Signal & Ground	Iso. White Housing	A	31-5431▲	4.43	3.31	2.47	2.08
		Iso. Black Housing	A	31-5538▲	4.43	3.31	2.47	2.08
		Metal Housing	A	31-5640▼	Contact your distributor for price			
Low Profile, Printed Circuit Angle Bulkhead Receptacle (J), Mount to Board w/Two Fork Pins	Blunt Posts for Signal & Ground	Iso. White Housing	B	31-5486▲	4.43	3.31	2.47	2.08
		Iso. Black Housing	B	31-5540▲	4.43	3.31	2.47	2.08
		Metal Housing	B	31-5637▼	Contact your distributor for price			
Vertical, Printed Circuit Bulkhead Receptacle (J), Mount to Board w/Two Fork Pins	Blunt Posts for Signal & Ground	Iso. White Housing	C	31-5493▲	4.43	3.31	2.47	2.08
		Iso. Black Housing	C	31-5539▲	4.43	3.31	2.47	2.08
		Metal Housing	C	31-5633▼	Contact your distributor for price			

BNC PRINTED CIRCUIT BOARD RECEPTACLES • TFE insulation

Description	Terminal Type	Imp.	Fig.	Amphenol Number	List Price			
					10/24	25/99	100/499	500/999
PC Receptacle/Three Legs Post Terminal	Blunt Post	50Ω	D	31-5329 (Zinc Body)	4.87	3.65	2.72	2.29
				31-5158 (Brass Body)	Contact your distributor for price			
PC Receptacle/Four Legs & Terminal	Blunt Post	50Ω	F	18225	15.31	11.44	8.54	7.19
PC Receptacle (Jack) Four Legs/Post Terminal	Blunt Post	50Ω	E	31-5329-51RFX ■	Contact your distributor for price			
		50Ω	E	31-5329-52RFX ■	Contact your distributor for price			
		75Ω	E	31-5329-71RFX ■	Contact your distributor for price			
		75Ω	E	31-5329-72RFX ■	Contact your distributor for price			

BNC ADAPTERS

Description	Fig.	Amphenol Number	Military Number	List Price			
				10/24	25/99	100/499	500/999
Straight Adapter	G	31-219	UG-914	4.21	3.15	2.35	1.98
Straight Adapter	H	31-218	UG-491A	6.95	5.20	3.87	3.26
Angle Adapter	I	31-9 ◆	UG-306	10.09	7.54	5.63	4.74
Bulkhead, Pressurized	J	31-220H ‡	UG-492A	6.90	5.16	3.85	3.24
Bulkhead, Non Sealed Version of 31-220H		31-220N	—	6.07	4.53	3.38	2.85
Bulkhead, Pressurized	J	31-3220	UG-492D	8.11	6.33	5.30	4.46
Bulkhead, Isolated from Panel, Thermoplastic Ins.	K	31-4803	—	10.13	7.58	5.65	4.76
		31-4803-1101	—	11.75	11.46	9.54	5.51
Tee Adapter	L	31-208	UG-274A	8.26	6.18	4.60	3.87
		31-208-1051	UG-274A	11.32	11.04	9.19	5.31

▲ white Valox® housing, white noryl® insulator ▼ Noryl® SE-100-80283 insulator ■ Diallyl Phthalate insulation
◆ IBM 6028521 ‡ Wang 350-1054; IBM 5252764

G

BNC Straight Adapter

H

BNC Straight Adapter

I

BNC Angle Adapter

J

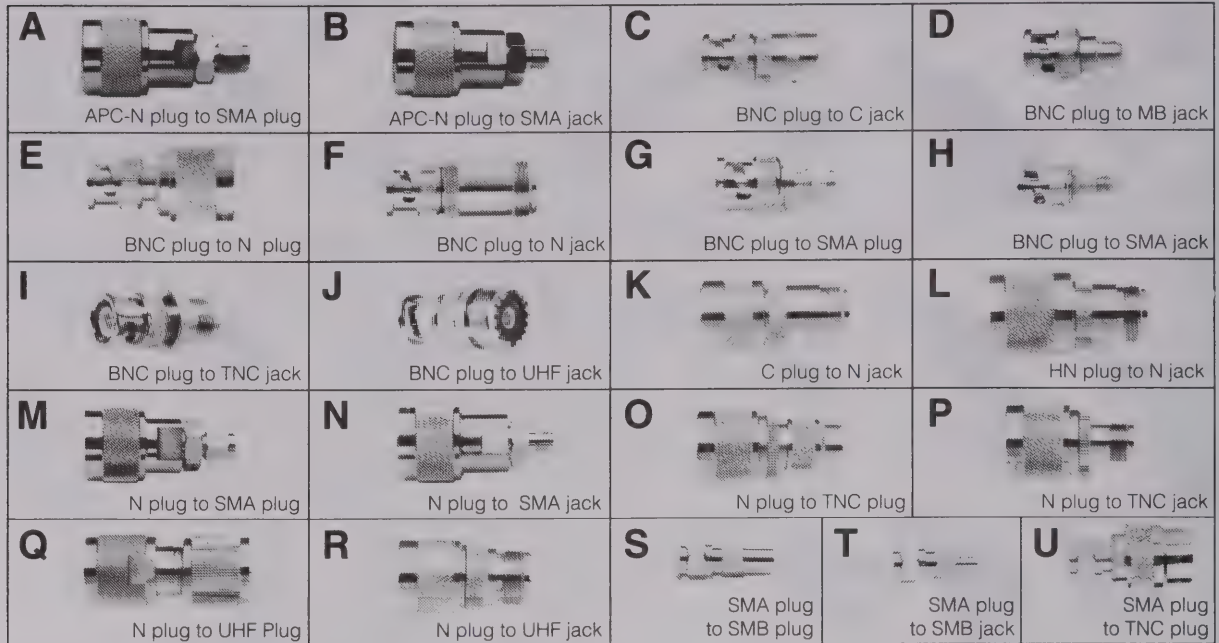
BNC Bulkhead Adapter

K

BNC Isolated Bulkhead Adapter

L

BNC Tee Adapter



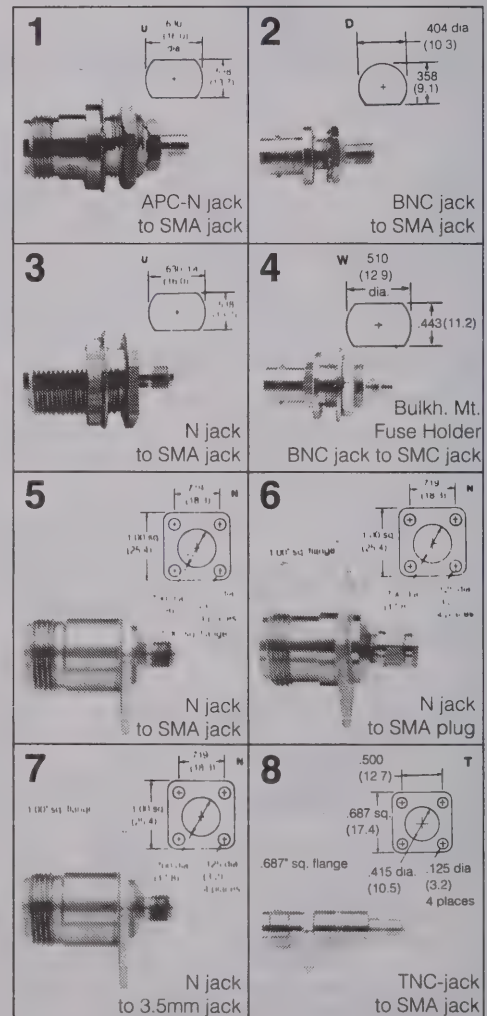
STRAIGHT ADAPTERS • PLUG TO PLUG OR JACK*

Adapter Ends*	Fig.	Amphenol Number	Military Number	List Price			
				10/24	25/99	100/499	500/999
APC-N Plug SMA Plug	A	131-1074	—	113.39	99.93	84.67	—
APC-N Plug SMA Jack	B	131-1075	—	118.34	104.28	88.37	—
BNC Plug C Jack	C	83175	UG-635/U	—	—	35.99	30.29
BNC Plug MB Jack	D	47275	—	—	—	51.96	43.73
BNC Plug N Plug	E	5225	UG-1034/U	—	—	20.01	16.84
BNC Plug N Jack	F	31-217	UG-349A/U	10.49	7.84	5.85	4.92
BNC Plug N Jack	F	31-217-RFX	—	6.37	4.97	4.06	3.50
BNC Plug SMA Plug	G	901-164†	—	26.12	23.25	18.41	15.41
BNC Plug SMA Jack	H	901-165†	—	34.82	30.99	24.55	20.54
BNC Plug TNC Jack	I	79025	—	14.00	10.47	7.81	6.57
BNC Plug UHF Jack	J	2900	UG-255/U	9.13	8.91	5.09	4.28
BNC Plug UHF Jack	J	2900-RFX	—	6.48	5.06	4.13	3.56
C Plug N Jack	K	82-540	UG-565A/U	49.54	37.04	27.63	23.25
HN Plug N Jack	L	16050	—	41.28	30.87	23.02	19.37
N Plug SMA Plug	M	901-292†	—	49.42	43.98	34.84	29.16
N Plug SMA Jack	N	901-294†	—	39.80	35.42	28.06	23.48
N Plug TNC Plug	O	79850	—	41.20	30.80	22.97	19.33
N Plug TNC Jack	P	78800	—	29.99	22.43	16.73	14.07
N Plug UHF Plug	Q	26700	UG-318/U	—	—	34.47	29.01
N Plug UHF Jack	R	4400	UG-146/U	12.62	9.44	7.04	5.92
SMA Plug SMB Plug	S	901-9038	—	28.58	25.44	20.15	16.86
SMA Plug SMB Jack	T	901-9037	—	28.56	25.42	20.13	16.85
SMA Plug TNC Plug	U	901-168†	—	—	—	27.86	23.62

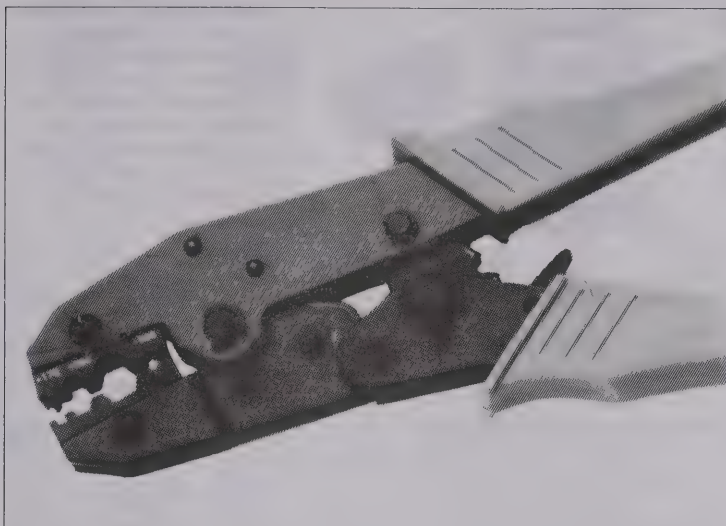
BULKHEAD AND PANEL MOUNT ADAPTERS

Adapter Ends*	Notes	Fig.	Amphenol Number	List Price			
				10/24	25/99	100/499	500/999
APC-N Jack SMA Jack	Bulkh. Mount	1	131-1185	Contact your distributor for price			
BNC Jack SMA Jack	Bulkh. Mount	2	901-9173	78.20	69.60	55.13	46.14
N Jack SMA Jack	w/gasket	3	901-3143-1000	49.46	44.02	34.87	29.18
BNC Jack SMC Jack	.062 amp Fuse	4	903-377A-52B1	Contact your distributor for price			
	.125 amp Fuse	4	903-377A-52B2	Contact your distributor for price			
N Jack SMA Jack	Four-hole Flange Mount	5	901-9011	37.98	33.80	26.78	22.41
N Jack SMA Plug		5	901-9720	42.82	38.11	30.19	25.26
N Jack 3.5mm Jack		6	901-82504-317	98.56	87.72	69.48	58.15
TNC Jack SMA Jack		7	901-9718	52.20	46.46	36.80	30.80
		8	901-280	Contact your distributor for price			

† BeCu body * for complete list of Between Series Adapters, contact your Amphenol distributor.



CTL Series Crimp Tools



Amphenol CTL Series commercial crimp tools are sold complete as a tool handle with die set included. They are similar in features and application to the TWINHEX 227-944 tool frame and die sets shown on the next page. Purchase of some or all of the four commercial tools shown below will allow the user to terminate most popular RG coaxial cables as well as Twinax cable for IBM system 3X/400 networks.

To order the tool required for your application, please refer to the Connector Assembly Instruction for your connector part number. The instruction sheet shows the correct CTL Series tool number for your part.

Cross Reference	
MIL-T-22520 Die Sets	227-No. Die Sets
/5-11, -13, -57 & -59	-1221-11, -13, -57 & -59
/5-09	-1221-09 & -32
/5-25 & -57	-1221-25 & -57
-	-1409
-	-1414

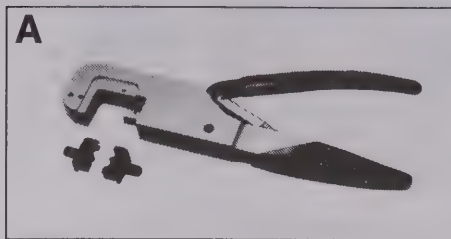
CTL Series Tool No.	List Price All Quant.
CTL-1	36.50
CTL-2	36.50
CTL-3	36.50
CTL-4	36.50

Tool Data

CTL Series Tool No. ▲	Hex Sizes	Cable RG-/U	Connectors ★	Notes
CTL-1	.052 (1.3)	RG-55, 58, 141, 142 223, 303, 400		for BNC, TNC, Mini-UHF, and Type N 3-Piece Crimp Connectors
	.100 (2.5)	RG-59, 62, 140, 210 Plenum 59, 62 Belden 9258, 9259, 9907, 89907		
CTL-2	.255 (6.5)			for BNC & TNC 3-Piece Crimp Connectors
	.068 (1.7)			
CTL-3	.213 (5.4)	RG-6 RG-174, 188, 316 RG-179, 187 Plenum 58 Belden 8281 and see notes		& for BNC 2 Piece RFX Crimp Plugs on RG-58, 59, 62 & Plenum 58, 59, 62
CTL-4		RG-58, 141, 142 RG-8, 11, 149, 213, 214, 225, 393 Ethernet Cables		for Type N 3-Piece Crimp Connectors
CTL-4		Belden 8227 9207, 89207 IBM 7362211 Twinax Cable		for Crimp-Crimp Twinax Plug 82-5589-CC and for Center Contacts of Twinax Plugs 82-5589, 82-5589-RFX and 82-GB635-CR

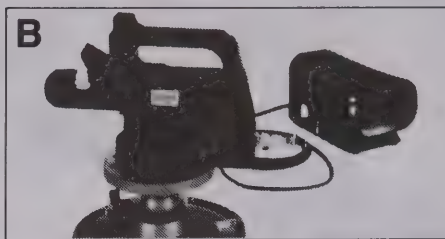
★ See Connector Assembly Information and RFX Connector Assembly pages for listings of all applicable Amphenol and RFX connector part numbers. ▲ See Connector Assembly Information and RFX Connector Assembly pages for assembly details.

TWINHEX Crimp Tool System



The Amphenol TWINHEX crimp tool system is used in Industrial/ Military Standard applications. It consists of a tool frame and a selection of die sets for use in assembling Amphenol RF connectors.

Pneumatic Crimp Tool



The Amphenol pneumatic crimp tool 227-60 is designed for use in high volume RF connector/cable assembly applications. Bench mountable on a swivel base, this high speed crimp tool runs on common 85/100 psi airline and is actuated by a foot switch for hands-free operation.

Description	Fig.	Military Number	Amphenol Number
Hand Tool Frame for use with Twinhex 227-1221-XX and other indicated Die Sets (Die Sets sold separately)	A	M22520 /5-01	227-944
		List Price	188.79
Pneumatic Crimp Tool with Swivel Base, Foot Switch and Hose (Connects tool to foot switch) (Die Sets for 227-60 are same as those used in HandTool Frame 227-944 and are sold separately)	B	—	227-60
		List Price	1943.49

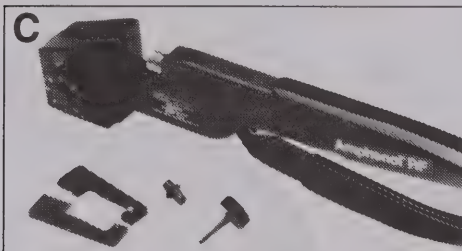
Hex Size†	Inches (mm)	Military Die Set Number	Amphenol Die Set Number	List Price
Cavity A (Outer)	Cavity B (Inner)			
.255(6.5)	.049(1.2) sq	—	227-980-1	142.18
.178(4.5)	.049(1.2) sq	—	227-980-2	142.18
.324(8.2)	.052(1.3) sq	—	227-980-3	142.18
.178(4.5)	.052(1.3) sq	—	227-980-7	◆
.128(3.2)	.105(2.7)	M22520/5-03	227-1221-03	89.61
.178(4.5)	.068(1.7)	M22520/5-09	227-1221-09	89.61
.213(5.4)	.068(1.7)	M22520/5-11	227-1221-11	89.61
.255(6.5)	.068(1.7)	M22520/5-13	227-1221-13	89.61
.263(6.7)	.068(1.7)	M22520/5-15	227-1221-15	89.61
.384(9.8)	—	M22520/5-23	227-1221-23	89.61
.429(10.9)	.100(2.5)	M22520/5-25	227-1221-25	89.61
.324(8.2)	.100(2.5)	M22520/5-29	227-1221-29	89.61
.374(8.2)	.068(1.7)	—	227-1221-32	89.61
.374(8.2)	.151(3.8)	M22520/5-37	227-1221-37	◆
.213(5.4)	.100(2.5)	M22520/5-57	227-1221-57	89.61
.255(6.5)	.100(2.5)	M22520/5-59	227-1221-59	89.61
.240(6.1) dia	.044(1.1) sq	—	227-1402	272.98
.213(5.4)	.052(1.3) sq	—	227-1409	108.78
.429(10.9)	B/C=.075(1.9)	—	227-1414	98.10
.160(4.1)	.049(1.2) sq	—	227-1448	◆

Order Information

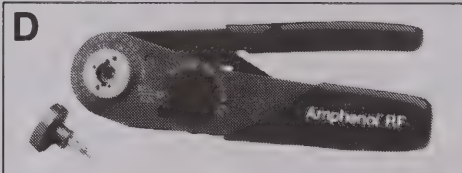
TWINHEX tool frame 227-944 (M22520/5-01) and pneumatic crimp tool 227-60 are sold without dies. To order the die set required for your application, please refer to the Connector Assembly Instruction for your connector part number, and there the correct die set number for your part is listed in the column headed Die Set for Tool 227-944 (& for 227-60).

SMA and APC-7 tools

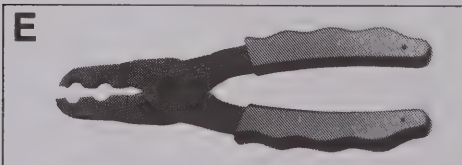
SMA Compression Crimp Tool



Mini 8-indent Tool for Crimping SMA Center Contacts

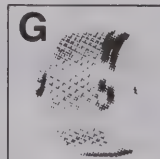
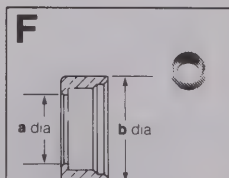


SMA Compression Crimp Sleeve Removal Tool

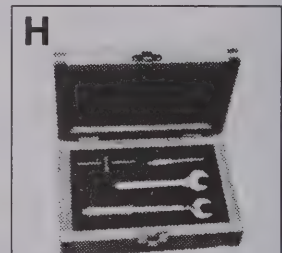


SMA Compression Crimp Sleeves				List Price			
Description	Dim. a	Dim. b	Fig.	Amphenol No.	10/24	25/49	50/99
Pkge. of 50 for .141" S/R	.147(3.7)	.220(5.6)	F	901-6255-1	0.72	0.64	0.58
Pkge. of 50 for .086" S/R	.092(2.3)	.165(4.2)	F	901-6374-1	0.72	0.64	0.58

Description	Fig.	Amphenol No.	Military No.	List Price
SMA Compression Crimp Tool Frame	C	227-1451	M22520/36-101	
Positioning Dies for .086" S/R	C	227-1451-1	M22520/36-102	
Positioning Dies for .141" S/R	C	227-1451-2	M22520/36-103	
Locator Pin for 901-606, -613, -614	C	227-1451-3	M22520/36-104	
Locator Pin for 901-617, -618, -619, -620, -621, -622	C	227-1451-4	M22520/36-105	
Removal Tool for Locator Pins	C	227-1451-5	—	◆
Mini 8-indent Tool Frame for Crimping SMA Center Contacts	D	227-1454	M22520/2-01	
Positioner for SMA Plugs 901-9511-1SFC, -3SFC, -12SFC	D	227-1454-1	—	
SMA Compression Crimp Sleeve Removal Tool	E	227-901-2512	—	



227-901-2400 - SMA Taper Tool, used to put point on center conductor of .141" semi-rigid cable, for connectors using cable center conductor as center contact of connector. List Price 80.27



227-131-2025 APC-7 Tool Kit, recommended for assembly and disassembly of connectors to airline. Kit contains collet extractor, line wrench, spanner wrench, and torque wrench. List Price 497.09

★ See Connector Assembly Information and RFX Connector Assembly pages for listings of all applicable Amphenol and RFX connector part numbers

▲ See Connector Assembly Information and RFX Connector Assembly pages for assembly details. ‡ Except as noted.. ◆ Contact your distributor for price.

BANANA JACKS/PLUGS/BINDING POSTS



MDP, 4892
4898



MDP-ST, 1330,
1330-ST



1325, 1809,
2477



1825,
4897



1581, 4900,
2854



2269



4684



5167,
5168



5169,
5170



5173



3750, 3760,
3770, 2382,
2439



4243, 2440



2244



2142



3452



4543

Model MDP Standard Double Banana Plug—Top stackable. Set screws secure leads. Nickel-plated finish. ABS insulation. Ten colors. Price Each **\$2.02**

Model 4892 Standard Double Banana Plug—Similar to MDP, but gold-plated finish. Colors: Black, red. Price Each **\$3.99**

Model 4898 Standard Banana Plug—Similar to MDP, but with polyethylene sulfide insulation. Colors: Black, blue. Price Each **\$2.29**

Model MDP-ST Standard Double Banana Plug with Solder Turret Terminals—Similar to MDP, but with solder turret terminals. Price Each **\$2.82**

Model 1330 Component Mounting Double Banana Plug—Features recess for mounting small components. Set screws secure leads. Jacks for top stack-up of multiple connections. Colors: Black, red. Price Each **\$2.24**

Model 1330-ST Component Mounting Double Plug With Solder Turret Terminals—Similar to 1330, but with solder turret terminals. Price Each **\$2.82**

Model 1325 Solderless Stack-up Banana Plug—Set screw secures lead. Jack for top stack-up; cross holes for side stack-up. Nickel-plated finish. ABS insulation. Ten colors. Price pkg. of 10 per color **\$11.72**

Model 2477 Miniature Banana Jack to Banana Plug—Nickel-plated brass. ABS insulation. Colors: Black, red. Price pkg. of 10 per color **\$15.98**

Model 1809 Pin Jack to Banana Plug—Nickel plated brass. ABS insulation. Colors: Black, red. Price pkg. of 10 per color **\$18.11**

Model 1825 Solderless Stack-up Banana Plug With Safety Collar—Features integral safety collar that insulates exposed wire leads. Set screw secures lead. Nickel-plated finish. ABS insulation. Ten colors. Price pkg. of 10 per color **\$11.72**

Model 4897 Solderless Stack-up Banana Plug With Safety Collar—Similar to 1825, but gold plated finish. Colors: Black, red. Price Each **\$2.40**

Model 3276 Miniature Banana Plug with Threaded Stud—.230" long threaded stud for rapid mounting. Solder turret for attachment of wires. Furnished with nickel-plated 4-40 hex nut. Gold plated finish. Price pkg. of 10 per color **\$10.65**

Model 4513 Miniature Banana Plug With Threaded Stud—Same as 3276, except .480" thread length. Price pkg. of 10 per color **\$15.44**

Model 1581 Banana Jack—Closed-entry jack. Mounts in panels from .063" to .375" thick. Bright tin-plated brass. Polycarbonate insulation. Ten colors. Price pkg. of 10 per color **\$8.52**

Model 2854 Banana Jack—Similar to 1581, but gold-plated finish. Ten colors. Price pkg. of 10 per color **\$17.57**

Model 4900 Banana Jack—Similar to 1581, but with polyphenylene sulfide insulation. Colors: Black, blue. Price pkg. of 10 per color **\$12.78**

Model 2269 Double Banana Jack—Closed entry receptacle. Mounts in panels from .063" to .375" thick. Colors: Black, red. Price Each **\$2.40**

Model 4684 BNC Female To Single Banana Plug with Ground Lead—Allows ground jack to be located up to 2.5" away from input/output jack. Price Each **\$10.33**

Model 5750 Do-It-Yourself Low Cost Banana Plug—Nickel plated beryllium copper. Accepts .144" Dia. Wire. Colors: Black, red. Price Each **\$0.75**

Model 5167 Do-It-Yourself In-Line Banana Jack With Flexible Boot—Two piece design allows wire to be crimped or soldered to jack. Nickel-plated brass. Flexible PVC insulation. Accepts wires 22, 20, 18 AWG. Colors: Black, red. Price pkg. of 10 per color **\$15.98**

Model 5168 Do-It-Yourself In-Line Banana Jack With Flexible Boot—Same as 5187, but accepts wire sizes #16 and 14 AWG. Colors: Black, red. Price Each **\$1.97**

Model 5169 Do-It-Yourself In-Line Banana Plug With Flexible Boot—Two-piece design allows wire to be crimped or soldered to plug. Nickel-plated. Flexible PVC insulation. Accepts wire sizes #22, 20, 18 AWG. Colors: Black, red. Price Each **\$2.02**

Model 5170 Do-It-Yourself In-Line Banana Plug With Flexible Boot—Same as 5169, but accepts wire sizes #16 and 14 AWG. Colors: Black, red. Price Each **\$2.02**

Model 5173 Do-It-Yourself In-Line .080" Pin Tip Plug with Flexible Boot—Two piece design allows wire to be crimped or soldered to pin tip plug. Nickel plated brass. PVC insulation. Colors: Black, red. Price Each **\$2.13**

Model 3750 Standard Binding Post—Accepts standard banana plug. Thin line design. 8-32 hex nut and lockwasher included. Mounts in panels .062" to .250" thick. Gold-plated brass. Polycarbonate insulation. Ten colors. Price Each **\$3.41**

Model 3760 Standard Binding Post—Same as 3750, but with bright tin-plated finish. Ten colors. Price Each **\$2.34**

Model 3770 Standard Binding Post—Same as 3750, but with gold-plated Tellurium copper material. Ten colors. Price Each **\$4.74**

Model 4995 Binding Post per MIL-P-55149/8—Mounts in panels up to .125". Nickel plated brass. Colors: Black, red. Price Each **\$13.05**

Model 2382 Miniature Binding Post—Accepts miniature banana plug. Gold plated brass. Ten colors. Price Each **\$3.62**

Model 2439 Miniature Binding Post—Accepts miniature banana plug. Bright tin plated brass. Ten colors. Price Each **\$2.77**

Model 4243 Double Binding Post Assembly—Double binding post with captive thumb nuts. Bright tin plated brass. Colors: Red, black. Price Each **\$4.58**

Model 2440 Miniature Double Binding Post—Accepts miniature banana plugs on .50" centers. Bright tin plated brass. Colors: Black, red. Price Each **\$5.64**

Model 4115 Shorting Link for Standard Binding Posts—Nickel plated brass. Price pkg. of 10 **\$6.39**

Model 4995 Binding Post per MIL-P-55149/8—Spring loaded binding post mounts in panel up to .125" thick. Nickel plated brass. Colors: Black, red. Price Each **\$13.05**

Model 2244 Miniature Double Banana Plug—Set screws secure wires of component leads. Gold-plated brass. ABS insulation. Colors: Black, red. Price Each **\$3.99**

Model 2142 Miniature Insulated Banana Jack—8-32 hex nut and lockwasher included. Gold-plated brass. Polycarbonate insulation. Mounts in panels up to .250" thick. Ten colors. Price pkg. of 10 per color **\$10.65**

Model 3542 Pin Jack—Closed entry. .080" dia. jack. Gold-plated pin jack. Polycarbonate insulation. Nickel-plated hex nut and lockwasher included. Ten colors. Price pkg. of 10 per color **\$12.78**

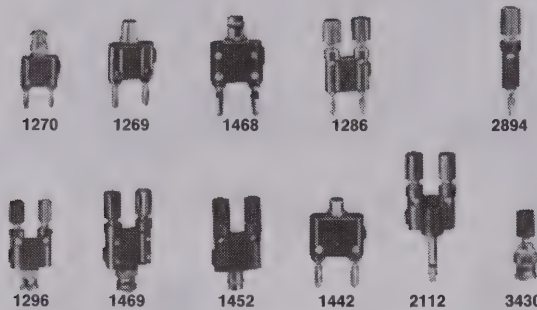
Model 1922 Solderless Stackup Pin Tip Plug—Nickel plated brass .080" pin. ABS insulation. Colors: Black, red. Price pkg. of 10 per color **\$4.21**

Model 3452 Miniature Double Pin Tip Plug with Shorting Bar—Gold plated brass .080" pins on .50" centers. ABS insulation. Colors: Black, red. Price Each **\$3.99**

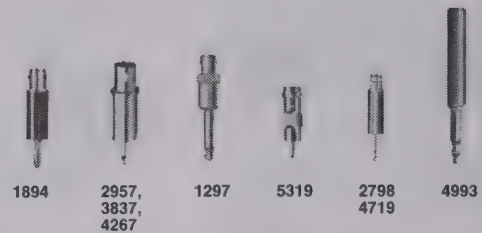
Model 4543 Miniature Double Pin Tip Jack—Gold plated brass .080" pin. Polycarbonate insulation. Colors: Black, red. Price Each **\$3.46**

**OUR PRICES ARE COMPETITIVE DUE TO OUR ASSOCIATION
WITH A NATIONAL BUYING GROUP.**

BNC ADAPTERS



- Model 1270 BNC Male to Double Banana Plug Adapter**—50 ohm BNC, standard banana plugs. Nickel plated. Black ABS insulation. Price Each \$8.57
- Model 1269 BNC Female to Double Banana Plug Adapter**—50 ohm BNC standard double banana plug. Nickel-plated. Cross holes permit side stacking. Black ABS insulation. Price Each \$5.48
- Model 1468 BNC Female to Double Banana Plug, Four Terminal Isolation**—Provides isolation for a four terminal network. 50 ohm BNC, standard double banana plug. Nickel plated. Black polypropylene insulation. Price Each \$17.89
- Model 1286 Double Binding Post to Double Banana Plug**—Permits single or double banana plug to be used with equipment having banana jacks. Nickel plated. Cross holes permit side stacking. Black ABS insulation. Price Each \$7.24
- Model 2894 Binding Post to Single Banana Plug**—Cross hole provides side stackup. Nickel plated. Black ABS insulation. Price Each \$3.94
- Model 3430 Single Binding Post to BNC Male Adapter**—Similar to model 1296, except has single binding post. Colors: Black, red. Price Each \$5.11
- Model 1296 Double Binding Post to BNC Male Adapter**—Permits single or double banana plug to be used with equipment having BNC female. Black ABS body. 50 ohm BNC. Price Each \$10.22
- Model 1469 Double Binding Post to BNC Male**—Permits single or double banana plugs to be used with equipment having BNC female. Black polypropylene body. 50 ohm BNC. Price Each \$22.68



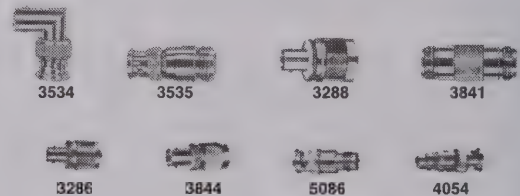
- Model 1452 Binding Posts to BNC Female Adapter**—Permits single or double banana plug to be used with equipment having BNC male. Binding posts have captive thumb nuts (one red and one black). Black ABS body. 50 ohm BNC. Price Each \$8.57
- Model 1894 BNC Female to Single Banana Plug**—50 ohm BNC female. Black ABS insulation. Price Each \$6.07
- Model 2957 BNC Female to Phono Plug Adapter**—All metal construction. 50 ohm BNC female. Nickel plated brass phono plug. Price Each \$7.99
- Model 3837 BNC Female to Tini Plug**—All metal construction. 50 ohm BNC female. Price Each \$10.49
- Model 4267 BNC Female to Micro Plug Adapter**—All metal construction. 50 ohm BNC female. Price Each \$11.56
- Model 1442 Double Banana Plug to Phono Jack**—Black polystyrene insulation. Price Each \$10.97
- Model 2112 Double Binding Post to Phone Plug**—Permits single or double banana plug to be used with equipment having three circuit phone jacks. Black ABS insulation. Price Each \$18.26
- Model 1297 BNC Female to Phone Plug Adapter**—All metal construction. 50 ohm BNC female. Price Each \$9.32
- Model 2798 BNC Female to PJ-051/WE-310 Phone Plug Adapter**—50 ohm BNC black ABS insulation. Price Each \$17.84
- Model 4719 BNC Female to Miniature Phone Plug Adapter**—50 ohm BNC female. Black ABS insulation. Price Each \$16.93
- Model 5319 BNC Female to Phono Plug**—Nickel plated. 50 ohm BNC female. Price Each \$5.06
- Model 4993 PJ051 Phone Plug to Miniature Phone Jack**—25" phone plug to .173" miniature phone jack. Nylon insulation. Price Each \$32.54

COAXIAL ADAPTERS



Shell: Brass, tarnish resistant plated. **Insulation:** Teflon®. **Center Contact:** Male, brass; female, beryllium copper, gold plated. **Operating Voltage:** 500 Vrms. **Operating Temperature:** -65° to +165°C. **Impedance:** 50 ohms.

Model	Description	Price Each
3283	BNC female to BNC female	\$ 4.42
3533	BNC male to BNC male	8.31
3284	BNC female to BNC female to BNC female	12.89
3285	BNC female to BNC male to BNC female	11.66
4896	BNC male to BNC female to BNC female	18.00
3534	BNC female to BNC male	10.12
3535	BNC male to "N" female	11.45
3288	BNC female to "N" male	7.99
3841	"N" female to "N" female	9.80



Operating Temperature: -65° to +165°C. **Impedance:** 50 ohms.

Model	Description	Price Each
5089	"N" female/female/female	\$19.54
3842	"N" male/male	10.97
3843	"N" female/male	17.04
3287	BNC male to UHF female	11.56
3286	BNC female to UHF male	7.61
3844	BNC female to TNC male	12.19
5086	BNC male to TNC female	10.92
4054	BNC male to phono plug	13.90

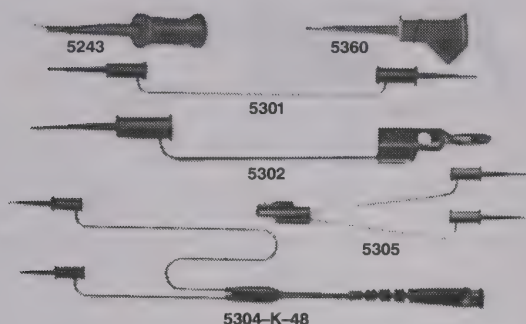
OSCILLOSCOPE PROBE KITS

Type	Attenuation	Bandwidth (MHz)	Price Each
5792	X1	20	\$31.95
5795	X10	100	38.87
4550A	X1, X10	100	43.00
5800	X1	30	41.54
5803	X10	200	44.73
5806	X1, X10	200	52.19
5827	X100	200	80.73
5809	X10	300	84.14
5812	X10	300	89.46
5815	.....	800	75.08



Replacement probes for all oscilloscopes including Tektronix, Hitachi, HP, Philips, B & K, Leader, Kikusui & Beckman. Modular probes provide high quality signal reproduction with X1, X10 or switchable X1-X10 attenuation. Bandwidth (± 3dB up to 300 MHz. Probes are easily repaired with cable. BNC and probe head screw together. Model 5812 features readout actuator. Model 5815 is an RF Detector Probe and works with any oscilloscope having 10MΩ input.

SMD GRABBER® TEST CLIPS



Do-it-yourself test clips especially suited for testing surface mounted packages on centers as small as .030". Pincer-like contact grasps individual legs of SMD's, such as the SOIC, SOJ, PCC, etc. Stainless steel, selectively gold plated contact. Glass filled nylon insulation. Rating: 1000 WVDC, 0.5 Amp, + 102°C. max.

Model 5243 SMD Grabber Test Clip—Access in cap for .090" maximum wire diameter. Ten Colors. Price pkg. of 10 per color **\$17.57**

Model 5360 SMD Grabber Test Clip with .025" Square Pin—.15" Square access hole in cap to .025" square pin. Ten Colors. Price Each ... **\$2.13**

Model 5301-12 SMD Grabber Test Lead—SMD Grabber test clip on each end of 12" wire. Colors: Black, red. Price Each **\$5.64**

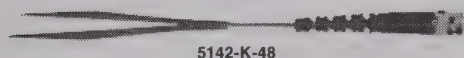
Model 5302-12 SMD Grabber Test Lead—SMD Grabber test clip to stacking banana plug on 12" wire. Colors: Black, red. Price Each **\$5.27**

Model 5304-K-36 SMD Grabber Test Lead—SMD Grabber test clips to BNC Male on 36" RG 174/U cable. Price Each **\$19.54**

Model 5305 SMD Grabber Breakout—SMD Grabber test clip leads to BNC female. Price Each **\$10.65**

Model 5520 SMD Grabber Kit—Kit contains 10 pcs. Model 5243, one of each color. Price Each **\$15.82**

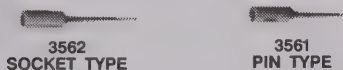
SMD TEST TWEEZER LEADS



Model 5142-K-48 SMD Test Tweezer Leads—SMD Test Tweezer to BNC male on 48" RG174/U cable. Price Each **\$18.74**

Model 5143-K-48 SMD Test Tweezer Leads—SMD Test Tweezer to single stacking banana plugs on RG174/U cable. Price Each **\$18.74**

CONNECTOR TEST ADAPTERS



Ideal for rapid testing of hard-to-get at contacts of multipin/socket rack or panel connectors. Flexible tip. Nickel plated brass jack. PVC insulation. Rating: 2500 WVDC, +50°C. max. Colors: Black, red.

Model 4690—22 AWG gold plated copper socket. 5 Amps. Price Each **\$3.83**

Model 4691—22 AWG gold plated brass pin. 5 Amps. Price Each **\$2.93**

Model 3560—20 AWG gold plated copper socket. 7 Amps. Price Each **\$2.93**

Model 3561—20 AWG gold plated brass pin. 7 Amps. Price Each **\$3.20**

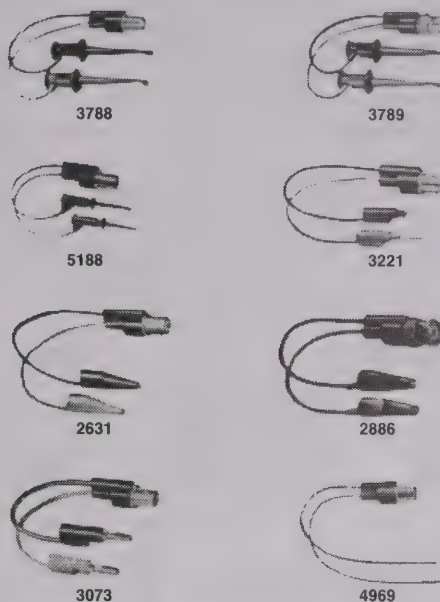
Model 3562—16 AWG gold plated copper socket. 13 Amps. Price Each **\$3.20**

Model 3563—16 AWG gold plated brass pin. 13 Amps. Price Each **\$2.77**

Model 3564—12 AWG gold plated copper socket. 23 Amps. Price Each **\$5.17**

Model 3565—12 AWG gold plated brass pin. 23 Amps. Price Each **\$2.77**

BNC OSCILLOSCOPE ACCESSORIES



Model 3788 BNC Female to Minigrabber® Test Clips—Price Each **\$7.77**

Model 3789 BNC Male to Minigrabber® Test Clips—Price Each .. **\$9.59**

Model 5188 BNC Female to Micrograbber® Test Clips—Price Each **\$10.33**

Model 3221 BNC Female to Stacking Pin Tip Plugs—Price Each .. **\$8.68**

Model 2630 BNC Female to Alligator Clips—Price Each **\$8.09**

Model 2631 BNC Female to Minigator Clips—Price Each **\$8.09**

Model 2886 BNC Male to Minigator Clips—Price Each **\$10.97**

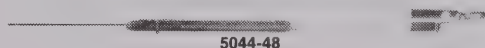
Model 3073 BNC Female to Stacking Banana Plugs—Price Each **\$7.46**

Model 3957 BNC Male to Stacking Banana Plugs—Price Each... **\$10.86**

Model 4969 BNC Female to 20 AWG Leads—Price Each **\$5.27**

Model 4970 BNC Male to 20 AWG Leads—Price Each **\$7.30**

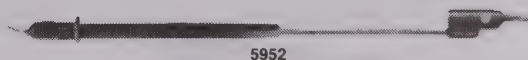
EXTENDABLE TIP PROBE TO BANANA PLUG



Ideal for tight areas on dense boards. Extension probe has brass collet, nylon insulation, stainless steel tip with Kynar® insulation and nylon chuck nut. Wire, 18 AWG, 65 x 36 t.c., PVC insulated, .144" O.D. Set includes one red and one black.

Model 5044-48 Test Lead Price Set **\$15.00**

SMD MICROTIP™ TEST PROBE TO BANANA PLUG



The microtip is designed to probe SMD contacts. Stainless steel tip. Nylon insulation. Wire, 20 AWG, 41 x 36 t.c., PVC insulated, .087" O.D. Available in black or red.

Model 5952 Test Lead Price Each **\$8.73**

DIP CLIPS

Pomona Electronic's Dip Clips are designed especially for testing dual in-line IC packages on high density PC boards. The high density Dip Clip test adapters are used for ultra dense packaged chips located adjacent to each other on .100" spacing.

Material: Contact, tarnish resistant nickel silver or gold plated beryllium copper; stainless steel hinge pin and spring.

Insulation: Glass filled nylon, blue.

Rating: 500Vrms, 1 amp, +102°C max.

No. of Pins	Type		Contact Material	Price Each
	Standard	High Density		
8	5108	5208	Gold plated beryllium copper	\$ 7.93
14	5014	5114	Spring tempered nickel silver	7.61
	5214	5314	Gold plated beryllium copper	9.74
16	3916A	4236A	Spring tempered nickel silver	6.82
	5116	5216	Gold plated beryllium copper	9.69
20	5120	5220	Gold plated beryllium copper	11.56
24	4124A	4324A	Spring tempered nickel silver	15.02
	5124	5224	Gold plated beryllium copper	19.44
40	4140A	4340A	Spring tempered nickel silver	21.94
	5140	5240	Gold plated beryllium copper	26.73

Oxide Penetrating Dip Clips are designed to be used with DIP IC's exposed to contaminating environments.

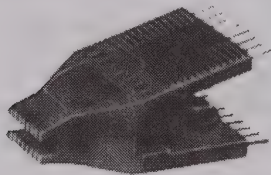
Material: Contact, tarnish resistant nickel silver or gold plated beryllium copper; stainless steel hinge pin and spring.

Insulation: Glass filled nylon, gray.

Rating: 500Vrms, 1 amp, +102°C max.

Model	No. of Pins	Price Each
5649	8	\$11.93
5650	14	11.50
5692	16	10.33
5693	20	17.36
5694	24	22.58
5695	40	33.02

SOIC CLIP® TEST ADAPTERS



Test clips have a spring design similar to Pomona's Dip Clip Test Adapter. The clip design allows testing of wide or narrow body chips and smaller size PLCC.

Upper: .025" square pins, gold plated phosphor bronze.

Lower: Contacts, gold plated beryllium copper.

Insulation: Glass filled nylon, blue.

Rating: 500Vrms, 1 amp, +102°C max.

Model	No. of Pins	Price Each
5250	8	\$ 8.00
5251	14	8.75
5252	16	9.50
5253	20	10.95
5254	24	15.95
5437	28	19.50

SOIC Clip® Test Adapter Kit

Kit contains 6 sizes of SOIC Clips: 8, 14, 16, 20, 24 and 28 Pin, housed in a protective case.

Model 5514—Price Each \$65.50

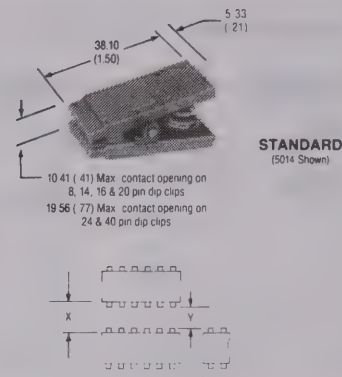
DO-IT-YOURSELF GRABBERS

The gold plated contact attaches rapidly to component leads and terminals. The specially designed tip on the grabbers slides easily on .025" square pin wrapped wire terminals. These clips are available in many other configurations.



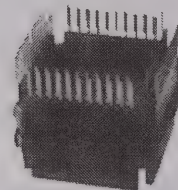
Model 5243 SMD Grabber® Test Clip—Gold plated phosphor bronze pincer type contact. Available in ten colors. Price Pkg. of 10 per color .. \$17.52

Model 5418 Minipincer Test Clip—Gold plated phosphor bronze pincer type contact. Available in ten colors. Price Each \$1.60



Testing Conditions	Dimensions, Minimum inches (mm)		
	X	Y	Z
Single Chip Testing Standard	.130 (3.30)	.075 (1.91)	.040 (1.02)
Single Chip Testing High Density	.105 (2.67)	.050 (1.27)	.040 (1.02)
Adjacent	.300 (7.62)	.075 (5.72)	.080 (2.03)

QUAD CLIP® TEST ADAPTERS



Test adapters designed for plastic leaded chip carriers (PCC or PLCC) with "J" leads. Snap-ring design allows Quad Clip® Test Adapter to fit directly onto IC, providing hands-free testing.

Upper: .025" square pins, gold plated phosphor bronze.

Lower: Contacts, gold plated beryllium copper.

Insulation: Glass filled nylon, gray.

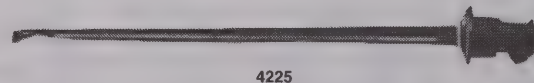
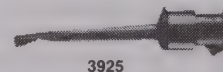
Rating: 500Vrms, 1 amp, +102°C max.

Model	No. of Pins	Price Each
5279	20	\$19.50
5280	28	31.90
5733	32	33.50
5281	44	37.50
5312	52	43.50
5401	68	49.50
5402	84	59.50

Quad Clip® Test Adapter Kit

Kit contains 6 sizes of Quad Clips: 20, 28, 32, 44, 52, 68 and 84 pin, housed in a protective case.

Model 5515A—Price Each \$245.00



Model 4233 Minigrabber® Test Clip—Gold plated beryllium copper hook type test clip. Available in ten colors. Price Pkg. of 10 per color .. \$13.31

Model 3925 Minigrabber® Test Clip—Gold plated beryllium copper hook type test clip. Available in ten colors. Price Pkg. of 10 per color .. \$12.78

Model 4225 Maxigrabber® Test Clip—Gold plated beryllium copper hook type test clip. Available in ten colors. Price Each \$3.46

MINIGRABBER® TEST CLIPS



3925,4555,4011

4723,4826

Model 3925 Do-It-Yourself Minigrabber® Test Clip—Accepts .090" O.D. wire. Available in ten colors. Price Pkg. of 10 per color **\$12.78**

Model 5522 Do-It-Yourself Minigrabber® Test Clip Kit—Contains 10 pcs. Model 3925, one of each color. Price Each..... **\$11.72**

Model 4176-02 Do-It-Yourself Minigrabber® Test Clip Kit—Contains 2 pcs. Model 3925, black and red. Price Each **\$2.93**

Model 4555 Do-It-Yourself Minigrabber® Test Clip—Accepts .144" O.D. wire. Available in all ten colors. Price pkg. of 10 per color Price Each **\$12.78**

Model 4011 Minigrabber® Test Clip with 6-32 Thread—Can be used with oscilloscope leads equipped with 6-32 screw. Colors: Black, red. Price Each **\$3.04**

Model 4723 Minigrabber® Test Clip with Banana Jack—Has a banana jack built into the plunger. Available in black, red or white. Price Each **\$3.99**

Model 4826 Minigrabber® Test Clip with Pin Jack—Has a .080" pin jack built into the plunger. Available in black, red or white. Price Each **\$5.48**

GRABBER® TEST CLIPS WITH .025" SQUARE PIN



4587

4521

Model 4587 Minigrabber® Test Clip with .025" Square Pin—.15" square access hole for .025" square pin. Available in ten colors. Price Each **\$3.83**

Model 4521 Micrograbber® Test Clip with Square Pin—Recessed .025" square pin in cap. Available in all ten colors. Price Each..... **\$2.45**

MINIGRABBER® TEST CLIP TO STACKING BANANA PLUG



3782-12, 3782-16, 3782-60

Model	Lengths, ins. (mm)	Price Each
3782-12-*	12 (304.8)	\$3.25
3782-36-*	36 (914.1)	3.25
3782-60-*	60 (1524.0)	3.67

MINIGRABBER® TEST CLIP TO IN-LINE BANANA PLUG

4650-36-#	36 (914.1)	\$4.47
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MINIGRABBER® TEST CLIP, EACH END



3781-12, 3781-36, 3781-60

Model	Lengths, ins. (mm)	Price Each
3781-12-*	12 (304.8)	\$3.25
3781-36-*	36 (914.1)	3.25
3781-60-*	60 (1524.0)	3.67

Model 5523 Minigrabber® Kit—Package of 10 Minigrabber test clipleads, Model 3781-24, in assorted colors. Price Each **\$27.45**

Model 4538-# Minigrabber® Test Clip to Stacking Banana Plug—Minigrabber clip to banana plug on retractile wire. Price Each..... **\$9.00**

MINIGRABBER® TEST CLIP, ONE END ONLY



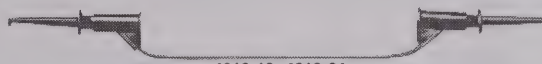
3780-60

Model	Lengths, ins. (mm)	Price Each
3780-60-*	60 (1524.0)	\$2.56

MICROGRABBER® TEST CLIP, TO STACKING BANANA PLUG

5053-24-#	24 (609.6)	\$5.17
5053-36-#	36 (914.1)	5.17

MINIGRABBER® TEST CLIP, EACH END



4613-12, 4613-24

Model	Lengths, ins. (mm)	Price Each
4613-12-#	12 (304.8)	\$5.27
4613-24-#	24 (609.6)	5.27

*For desired color, add 0-Black, 1-Brown, 2-Red, 3-Orange, 4-Yellow, 5-Green, 6-Blue, 7-Violet, 8-Gray, 9-White. # For desired color, add: 0-Black, 2-Red.

Model 5525 Micrograbber® Kit—Package of 10 Micrograbber test clip leads, Model 4613-24, in assorted colors. Price Each..... **\$47.45**

Model 3786-C-36 Minigrabber® Test Clips to Double Banana Plug—Minigrabber test clips to double banana plug on 36" RG58C/U cable. Price Each **\$12.94**

Model 5187-C-48 Minigrabber® Test Clips to BNC Male—Minigrabber leads to BNC male on 48" RG58C/U cable. Price Each **\$13.95**

MICROGRABBER® TEST CLIPS



4233

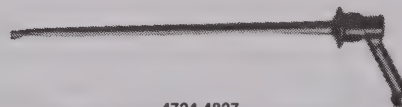
Model 4233 Do-It-Yourself Micrograbber® Test Clip—Accepts .090" max. O.D. wire. Available in ten colors. Price pkg. of 10 per color..... **\$13.31**

Model 5524 Do-It-Yourself Micrograbber® Kit—Contains 10 pcs. Model 4233, one of each color. Price Each **\$11.72**

MAXIGRABBER® TEST CLIPS



4225,4565



4724,4827

Model 4225 Do-It-Yourself Maxigrabber® Test Clip—Accepts .090" O.D. wire. Available in ten colors. Price Each..... **\$3.46**

Model 4565 Do-It-Yourself Maxigrabber® Test Clip—Accepts .144" O.D. wire. Available in ten colors. Price Each..... **\$3.46**

Model 4724 Maxigrabber® Test Clip with Banana Jack—Has standard banana jack built into the plunger. Available in black or red. Price Each..... **\$5.80**

Model 4827 Maxigrabber® Test Clip with Pin Jack—Has a .080" pin jack built into the plunger. Available in black or red. Price Each **\$7.03**

PRICES SHOWN ARE FOR REFERENCE ONLY. PLEASE CALL US FOR CURRENT QUOTES.

Model 2249-C Cable Assembly—BNC male each end. RG58C/U, 50 ohm in 12, 24, 36, 48, 60, 72, 120 and 180 inch lengths.

Model No.	Length (Ins.)	Price Each
2249-C-12	12	\$10.54
2249-C-24	24	11.18
2249-C-36	36	11.72
2249-C-48	48	12.57
2249-C-60	60	13.31
2249-C-72	72	13.95
2249-C-120	120	16.72
2249-C-180	180	20.24

Model 2249-E Cable Assembly—BNC male each end. RG59B/U, 75 ohm in 24, 36, 48, 60 and 72 inch lengths.

2249-E-24	24	\$11.82
2249-E-36	36	12.46
2249-E-48	48	13.10
2249-E-60	60	13.74
2249-E-72	72	14.38

Model 4964-SS Cable Assembly—Low Noise BNC male each end. Cable is Belden 9223 or equivalent, 50 ohms. Available in 24, 36, 48 and 60 inch lengths.

4964-SS-24	24	\$14.00
4964-SS-36	36	15.60
4964-SS-48	48	17.20
4964-SS-60	60	18.80

Model BNC-C Cable Assembly—BNC male each end. RG58C/U cable. Available in 18, 36 and 60 inch lengths.

BNC-C-18	18	\$12.25
BNC-C-24	24	12.57
BNC-C-36	36	13.31
BNC-C-48	48	13.95
BNC-C-60	60	14.70

Model 2B Cable Assembly—BNC male to double banana plug. Available with two conductor twisted pair (2BA) or RG58C/U cable (2BC). Available in 36 inch lengths.

2BA-36	36	\$13.37
2BC-36	36	12.41

Model 4530-C-36 Cable Assembly—BNC male to double banana plug. RG58C/U cable. Available in 36 inch lengths.

4530-C-36	36	\$12.99
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Model 1167-36 Cable Assembly—Two conductor shielded balanced line. Double banana plug with single banana plug. Two conductor shielded microphone cable. Available in 36 inch lengths.

1167-36	36	\$26.84
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Model 1756-48 Cable Assembly—Low thermal jumper shield. 12 AWG bare copper cable. Available in 48 inch lengths.

1756-48	48	\$37.28
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Model 4846-X-24 Cable Assembly—SMA male, each end. RG142B/U cable. Available in 24 inch lengths.

4846-X-24	24	\$40.42
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Model 3352-A-60 Cable Assembly—PJ-051 phone to alligator clips. Two conductor twisted pair cable. Available in 60 inch lengths.

3352-A-60	60	\$29.50
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Model 5026-36 Cable Assembly—Miniature phone plug to alligator clips. Two conductor shielded cable. Available in 36 inch lengths.

5026-36	36	\$27.05
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Model 4279-60 Cable Assembly—Miniature phone plug, each end. Two conductor shielded cable. Available in 60 inch lengths.

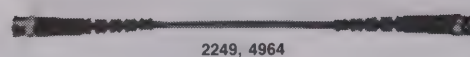
4279-60	60	\$25.40
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Model 4280-60 Cable Assembly—Miniature phone plug to PJ-051 phone plug. Two conductor shielded cable. Available in 60 inch lengths.

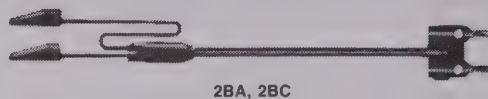
4280-60	60	\$54.47
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Model 4281-60 Cable Assembly—Miniature phone plug to double plug balanced line. Two conductor shielded cable. Available in 60 inch lengths.

4281-60	60	\$37.43
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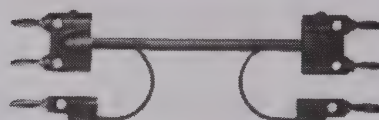
2249, 4964



2BA, 2BC



4530-C



1167



1756



4846-X



3352-A



5026



4280



4281

Model B Patch Cord—Stacking standard banana plug each end. Nickel plated finish. Available in 4, 8, 12, 18, 24, 36, 48, 60 and 72 inch lengths in ten colors.

Model	Length (In.)	Price Each
B-4	4	\$3.51
B-8	8	3.51
B-12	12	3.51
B-18	18	3.51
B-24	24	3.51
B-36	36	3.51
B-48	48	3.73
B-60	60	3.99
B-72	72	4.26

Model 5732 Patch Cord—Low cost banana plug, each end. Available in 24 and 48 inch lengths in black and red.

5732-24	24	\$2.00
5732-48	48	2.25

Model HB Patch Cord—Extension stacking banana plug each end. Available in 24, 36 and 48 inch lengths in black and red.

HB-24	24	\$5.59
HB-36	36	5.59
HB-48	48	5.80

Model 4702 Patch Cord—Banana plug to in-line banana jack. Available in 48 inch lengths in black and red.

4702-48	48	\$5.01
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Model 4741 Patch Cord—.025" square pin receptacle. Available in 6, 12, 24 and 36 inch lengths in ten colors.

4741-6	6	\$3.41
4741-12	12	3.41
4741-24	24	3.41
4741-36	36	3.41

Model P Pin Tip Patch Cord—Stacking .080" pin tip plug each end. Available in 4, 8, 12, 18, 24, 36, 48 and 60 inch lengths in black or red.

P-4	4	\$4.21
P-8	8	4.21
P-12	12	4.21
P-18	18	4.21
P-24	24	4.21
P-36	36	4.21
P-48	48	4.42
P-60	60	4.63

Model AL-B Patch Cord—Alligator clip each end. Available in 4, 8, 12, 24 and 36 inch lengths in black or red.

AL-B-4	4	\$3.99
AL-B-8	8	3.99
AL-B-12	12	3.99
AL-B-24	24	3.99
AL-B-36	36	3.99

Model 1166 Patch Cord—Alligator clip to stacking banana plug. Available in 8, 12, 24 and 36 inch lengths.

1166-8	8	\$3.99
1166-12	12	3.99
1166-24	24	3.99
1166-36	36	3.99

Model 2484 Patch Cord—In-line banana plug, each end, on retractile cord. Available in 48" extended length. Colors: Black, red.

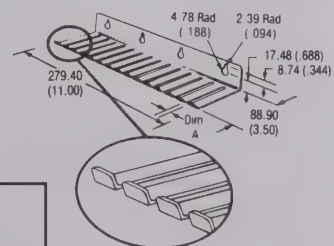
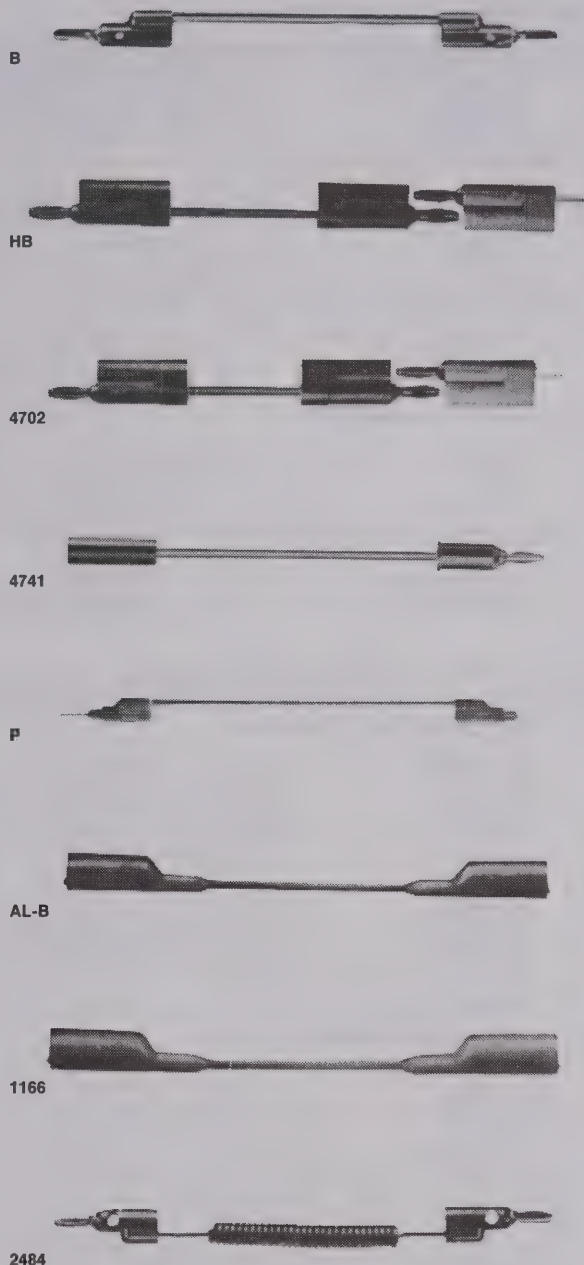
2484	48	\$9.64
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TEST LEAD HOLDER

Test lead holder mounts quickly to any vertical surface. Test leads are easy to store or remove. Three sizes available for different size cables.

Model	Color	Cable Dia.	Price Each
1508	Orange	.210"	\$5.27
2708	Blue	.320"	5.27
4408	Black	.450"	5.27

**WE CARRY MOST MAJOR BRANDS.
IF YOU CAN'T FIND WHAT YOU
WANT, CALL US FOR INFORMATION.**



BUTT CONNECTORS

VINYL INSULATED BUTTED SEAM

PART NUMBER	DESCRIPTION
MVU10BCK	BUTT CONNECTOR, YEL VINYL INSULATED, 10-12 AWG
MVU14BCK	BUTT CONNECTOR, BLU VINYL INSULATED, 14-16 AWG
MVU18BCK	BUTT CONNECTOR, RED VINYL INSULATED, 18-22 AWG

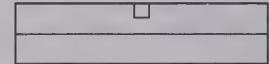


NYLON INSULATED WITH GRIP

MNG10BCK	BUTT CONNECTOR, YEL NYLON INSULATED, 10-12 AWG
MNG14BCK	BUTT CONNECTOR, BLU NYLON INSULATED, 14-16 AWG
MNG18BCK	BUTT CONNECTOR, RED NYLON INSULATED, 18-22 AWG
MNG24BCK	BUTT CONNECTOR, YEL NYLON INSULATED, 24-26 AWG

HI-TEMP NON-INSULATED BUTTED SEAM

MU10BCHTK	BUTT CONNECTOR, NON-INSULATED, 10-12 AWG
MU14BCHTK	BUTT CONNECTOR, NON-INSULATED, 14-16 AWG
MU18BCHTK	BUTT CONNECTOR, NON-INSULATED, 18-22 AWG



HEAT SHRINK SEAMLESS

MH10BC	BUTT CONNECTOR, HEAT SHRINK, YEL, 10-12 AWG
MH14BC	BUTT CONNECTOR, HEAT SHRINK, RED, 14-16 AWG
MH18BC	BUTT CONNECTOR, HEAT SHRINK, BLU, 18-22 AWG



CLOSED END NYLON INSULATED - STEEL INSERT

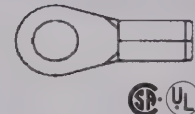
MN10CEC/STK	CLOSED END, CONNECTOR, 10-18 AWG
MN14CEC/STK	CLOSED END, CONNECTOR, 14-22 AWG



RING TERMINALS

NON-INSULATED BUTTED SEAM

MU10-10RK	RING TERMINAL, NON-INSULATED, 10-12 AWG, #10 STUD
MU10-14R/SK	RING TERMINAL, NON-INSULATED, 10-12 AWG, 1/4 STUD
MU10-16R/SK	RING TERMINAL, NON-INSULATED, 10-12 AWG, 5/16 STUD
MU14-10RK	RING TERMINAL, NON-INSULATED, 14-16 AWG, #10 STUD
MU14-6R/SK	RING TERMINAL, NON-INSULATED, 14-16 AWG, #6 STUD
MU14-8R/LK	RING TERMINAL, NON-INSULATED, 14-16 AWG, #8 STUD
MU18-10R/LK	RING TERMINAL, NON-INSULATED, 18-22 AWG, #10 STUD
MU18-4R/SK	RING TERMINAL, NON-INSULATED, 18-22 AWG, #4 STUD
MU18-6R/SK	RING TERMINAL, NON-INSULATED, 18-22 AWG, #6 STUD
MU18-8R/LK	RING TERMINAL, NON-INSULATED, 18-22 AWG, #8 STUD
MU24-2RK	RING TERMINAL, NON-INSULATED, 24-26 AWG, #2 STUD
MU24-4RK	RING TERMINAL, NON-INSULATED, 24-26 AWG, #4 STUD
MU24-6RK	RING TERMINAL, NON-INSULATED, 24-26 AWG, #6 STUD



VINYL INSULATED BUTTED SEAM

MVU-10-10RK	RING TERMINAL, YEL VINYL INSULATED, 10-12 AWG, #10 STUD
MVU-10-14R/SK	RING TERMINAL, YEL VINYL INSULATED, 10-12 AWG, 1/4 STUD
MVU-10-38R/SK	RING TERMINAL, YEL VINYL INSULATED, 10-12 AWG, 3/8 STUD
MVU-10-516R/SK	RING TERMINAL, YEL VINYL INSULATED, 10-12 AWG, 5/16 STUD
MVU-14-10R/LK	RING TERMINAL, BLU VINYL INSULATED, 14-16 AWG, #10 STUD
MVU-14-14R/SK	RING TERMINAL, BLU VINYL INSULATED, 14-16 AWG, 1/4 STUD
MVU-14-38R/SK	RING TERMINAL, BLU VINYL INSULATED, 14-16 AWG, 3/8 STUD
MVU-14-516R/SK	RING TERMINAL, BLU VINYL INSULATED, 14-16 AWG, 5/16 STUD
MVU-14-6R/SK	RING TERMINAL, BLU VINYL INSULATED, 14-16 AWG, #6 STUD
MVU-14-8R/LK	RING TERMINAL, BLU VINYL INSULATED, 14-16 AWG, #8 STUD
MVU-18-10R/LK	RING TERMINAL, RED VINYL INSULATED, 18-22 AWG, #10 STUD
MVU-18-14R/SK	RING TERMINAL, RED VINYL INSULATED, 18-22 AWG, 1/4 STUD
MVU-18-2R/SK	RING TERMINAL, RED VINYL INSULATED, 18-22 AWG, #2 STUD
MVU-18-38R/SK	RING TERMINAL, RED VINYL INSULATED, 18-22 AWG, 3/8 STUD
MVU-18-4R/SK	RING TERMINAL, RED VINYL INSULATED, 18-22 AWG, #4 STUD
MVU-18-516R/SK	RING TERMINAL, RED VINYL INSULATED, 18-22 AWG, 5/16 STUD
MVU-18-6R/SK	RING TERMINAL, RED VINYL INSULATED, 18-22 AWG, #6 STUD
MVU-18-8R/LK	RING TERMINAL, RED VINYL INSULATED, 18-22 AWG, #8 STUD



NYLON INSULATED WITH INSULATED GRIP

MNG10-10RK	RING TERMINAL, YEL NYLON INSULATED, 10-12 AWG, #10 STUD
MNG10-14R/SK	RING TERMINAL, YEL NYLON INSULATED, 10-12 AWG, 1/4 STUD
MNG10-6RK	RING TERMINAL, YEL NYLON INSULATED, 10-12 AWG, #6 STUD
MNG10-8RK	RING TERMINAL, YEL NYLON INSULATED, 10-12 AWG, #8 STUD
MNG14-10R/LK	RING TERMINAL, BLU NYLON INSULATED, 14-16 AWG, #10 STUD
MNG14-6R/SK	RING TERMINAL, BLU NYLON INSULATED, 14-16 AWG, #6 STUD
MNG14-8R/LK	RING TERMINAL, BLU NYLON INSULATED, 14-16 AWG, #8 STUD
MNG18-10R/LK	RING TERMINAL, RED NYLON INSULATED, 18-22 AWG, #10 STUD
MNG18-4R/SK	RING TERMINAL, RED NYLON INSULATED, 18-22 AWG, #4 STUD
MNG18-6R/SK	RING TERMINAL, RED NYLON INSULATED, 18-22 AWG, #6 STUD
MNG18-8R/LK	RING TERMINAL, RED NYLON INSULATED, 18-22 AWG, #8 STUD

FORK TERMINALS

BLOCK NON-INSULATED BUTTED SEAM

PART NUMBER	DESCRIPTION
MU10-10FBK	FORK TERMINAL, NON-INSULATED, 10-12 AWG, #10 STUD
MU10-8FBK	FORK TERMINAL, NON-INSULATED, 10-12 AWG, #8 STUD
MU14-10FBK	FORK TERMINAL, NON-INSULATED, 14-16 AWG, #10 STUD
MU14-6FBK	FORK TERMINAL, NON-INSULATED, 14-16 AWG, #6 STUD
MU14-8FBK	FORK TERMINAL, NON-INSULATED, 14-16 AWG, #8 STUD
MU18-4FB/SK	FORK TERMINAL, NON-INSULATED, 18-22 AWG, #4 STUD
MU18-6FBK	FORK TERMINAL, NON-INSULATED, 18-22 AWG, #6 STUD
MU18-8FBK	FORK TERMINAL, NON-INSULATED, 18-22 AWG, #8 STUD



BLOCK VINYL INSULATED BUTTED SEAM

MVU10-10FBK	FORK TERMINAL, YEL VINYL INSULATED, 10-12 AWG, #10 STUD
MVU10-8FBK	FORK TERMINAL, YEL VINYL INSULATED, 10-12 AWG, #8 STUD
MVU14-10FBK	FORK TERMINAL, BLU VINYL INSULATED, 14-16 AWG, #10 STUD
MVU14-6FBK	FORK TERMINAL, BLU VINYL INSULATED, 14-16 AWG, #6 STUD
MVU14-8FBK	FORK TERMINAL, BLU VINYL INSULATED, 14-16 AWG, #8 STUD
MVU18-4FB/SK	FORK TERMINAL, RED VINYL INSULATED, 18-22 AWG, #4 STUD
MVU18-6FBK	FORK TERMINAL, RED VINYL INSULATED, 18-22 AWG, #6 STUD
MVU18-8FBK	FORK TERMINAL, RED VINYL INSULATED, 18-22 AWG, #8 STUD



FLANGED BLOCK VINYL INSULATED BUTTED SEAM

MVU10-10FFBK	FORK TERMINAL, YEL VINYL INSULATED, 10-12 AWG, #10 STUD
MVU10-8FFBK	FORK TERMINAL, YEL VINYL INSULATED, 10-12 AWG, #8 STUD
MVU14-10FFBK	FORK TERMINAL, BLU VINYL INSULATED, 14-16 AWG, #10 STUD
MVU14-6FFBK	FORK TERMINAL, BLU VINYL INSULATED, 14-16 AWG, #6 STUD
MVU14-8FFBK	FORK TERMINAL, BLU VINYL INSULATED, 14-16 AWG, #8 STUD
MVU18-6FFBK	FORK TERMINAL, RED VINYL INSULATED, 18-22 AWG, #6 STUD
MVU18-8FFBK	FORK TERMINAL, RED VINYL INSULATED, 18-22 AWG, #8 STUD



NYLON INSULATED WITH INSULATION GRIP

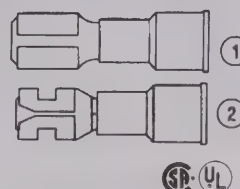
MNG10-10FK	FORK TERMINAL, YEL NYLON INSULATED, 10-12 AWG, #10 STUD
MNG10-6FK	FORK TERMINAL, YEL NYLON INSULATED, 10-12 AWG, #6 STUD
MNG10-8FK	FORK TERMINAL, YEL NYLON INSULATED, 10-12 AWG, #8 STUD
MNG14-10FK	FORK TERMINAL, BLU NYLON INSULATED, 14-16 AWG, #10 STUD
MNG14-6FK	FORK TERMINAL, BLU NYLON INSULATED, 14-16 AWG, #6 STUD
MNG14-8FK	FORK TERMINAL, BLU NYLON INSULATED, 14-16 AWG, #8 STUD
MNG18-10FK	FORK TERMINAL, RED NYLON INSULATED, 18-22 AWG, #10 STUD
MNG18-6FK	FORK TERMINAL, RED NYLON INSULATED, 18-22 AWG, #6 STUD
MNG18-8FK	FORK TERMINAL, RED NYLON INSULATED, 18-22 AWG, #8 STUD



DISCONNECTS

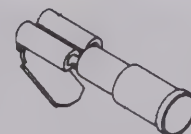
VINYL INSULATED BUTTED SEAM

MVU10-250DFK	FEM DISCONNECT .250", YEL VINYL INSULATED, 10-12 AWG
MVU14-110DFK	FEM DISCONNECT .110", BLU VINYL INSULATED, 14-16 AWG
MVU14-187DFK	FEM DISCONNECT .187", BLU VINYL INSULATED, 14-16 AWG
MVU14-250DFK	FEM DISCONNECT .250", BLU VINYL INSULATED, 14-16 AWG
MVU18-187DFK	FEM DISCONNECT .187", RED VINYL INSULATED, 18-22 AWG
MVU18-250DFK	FEM DISCONNECT .250", RED VINYL INSULATED, 18-22 AWG
MVU14-250DMK	MALE DISCONNECT .250", BLU VINYL INSULATED, 14-16 AWG
MVU18-187DMK	MALE DISCONNECT .187", RED VINYL INSULATED, 18-22 AWG
MVU18-250DMK	MALE DISCONNECT .250", RED VINYL INSULATED, 18-22 AWG



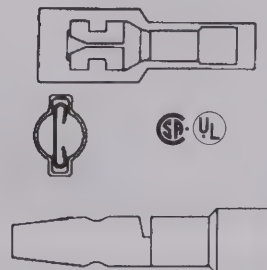
MULTI-STACK VINYL INSULATED BUTTED SEAM

MVU14-250DMFK	MALE/FEM DISCONNECT .250", BLU VINYL INSULATED, 14-16 AWG
MVU18-187DMFK	MALE/FEM DISCONNECT .187", RED VINYL INSULATED, 18-22 AWG



NYLON FULLY INSULATED WITH INSULATION GRIP

MNG10-250DFIK	FEM DISCONNECT .250", YEL NYLON FULL INSULATED, 10-12 AWG
MNG14-187DFIK	FEM DISCONNECT .187", BLU NYLON FULL INSULATED, 14-16 AWG
MNG14-250DFIK	FEM DISCONNECT .250", BLU NYLON FULL INSULATED, 14-16 AWG
MNG18-187DFIK	FEM DISCONNECT .187", RED NYLON FULL INSULATED, 18-22 AWG
MNG18-250DFIK	FEM DISCONNECT .250", RED NYLON FULL INSULATED, 18-22 AWG
MNG10-250DMIK	MALE DISCONNECT .250", YEL NYLON FULL INSULATED, 10-12 AWG
MNG14-187DMIK	MALE DISCONNECT .187", BLU NYLON FULL INSULATED, 14-16 AWG
MNG14-250DMIK	MALE DISCONNECT .250", BLU NYLON FULL INSULATED, 14-16 AWG
MNG18-187DMIK	MALE DISCONNECT .187", RED NYLON FULL INSULATED, 18-22 AWG
MNG18-250DMIK	MALE DISCONNECT .250", RED NYLON FULL INSULATED, 18-22 AWG

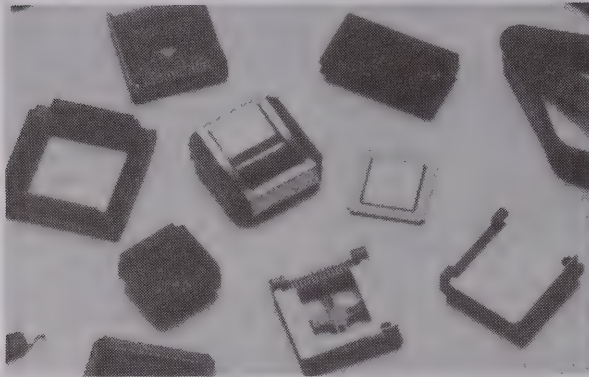


NYLON BULLET TYPE WITH INSULATION GRIP

MNG14-156DFIK	FEM DISCONNECT .156", BLU NYLON FULL INSULATED, 14-16 AWG
MNG18-156DFIK	FEM DISCONNECT .156", RED NYLON FULL INSULATED, 18-22 AWG
MNG14-156DMK	MALE DISCONNECT .156", BLU NYLON FULL INSULATED, 14-16 AWG
MNG18-156DMK	MALE DISCONNECT .156", RED NYLON FULL INSULATED, 18-22 AWG

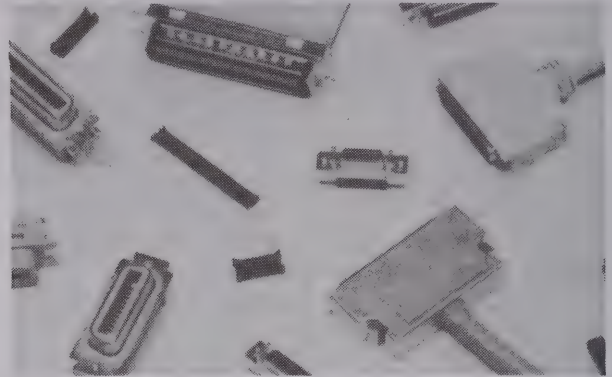


IC Socket Connectors



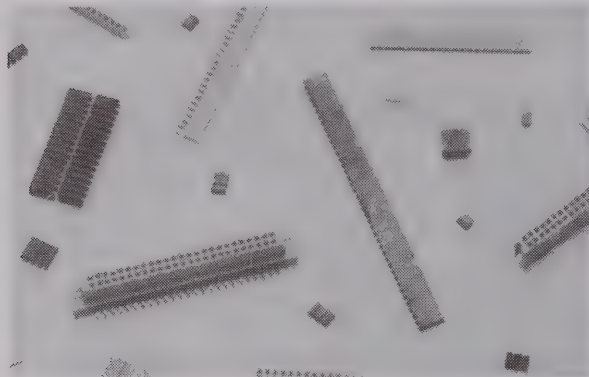
3M Textool™ OEM/production sockets are offered in six popular families. OEM ZIP DIPT™, PGA ZIF, Type "A" and "B" LCC, top and side extract PLCC, Low Profile SIMM, and OEM PQFP Sockets.

D Ribbon Connectors



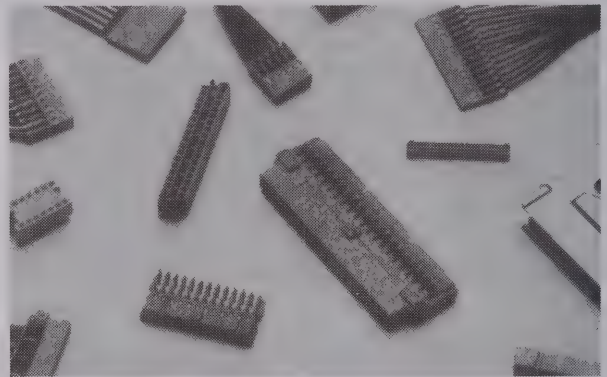
A miniature line of D Ribbon connectors has been added to our catalog. 3M now offers .050 inch boardmount and wiremount sockets, wiremount plugs, junction shells for round cable, a panel mounting screw, and socket dust covers.

Boardmount Socket Connectors



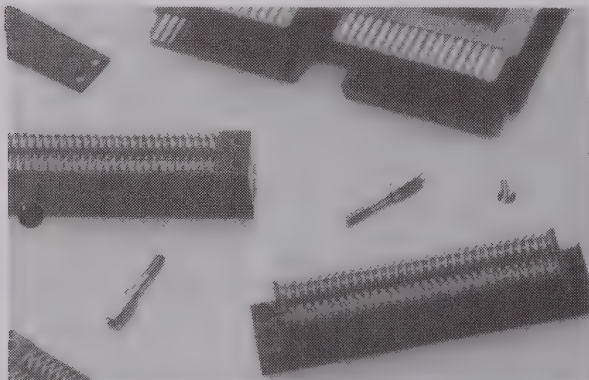
Boardmount sockets are most useful for board stacking applications. Choose from a wide range of pin counts, single or dual row versions, a variety of contact plating options, polarized, and many end-to-end stackable.

Wiremount Socket Connectors



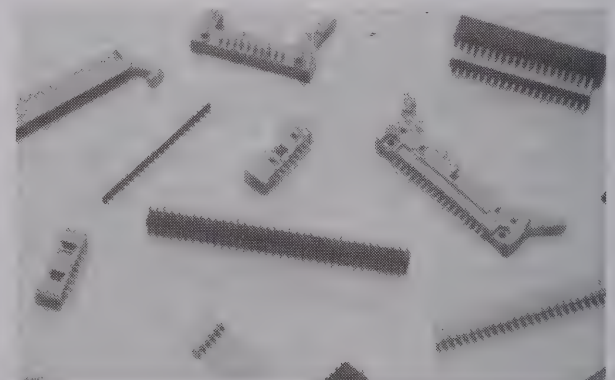
Wiremount socket connectors are most useful where high contact retention and quick and easy connections/disconnections are required. Choose from a wide range of pin counts (2 to 100) and contact spacings (.050 inch, .100 inch, and .150 inch).

"MIX" Stacking Connectors



A new connector series from 3M simplifies connections to printed circuit boards using the Intel Multibus II Parallel System Bus Architecture. The connectors are used to efficiently join two or more boards.

Headers



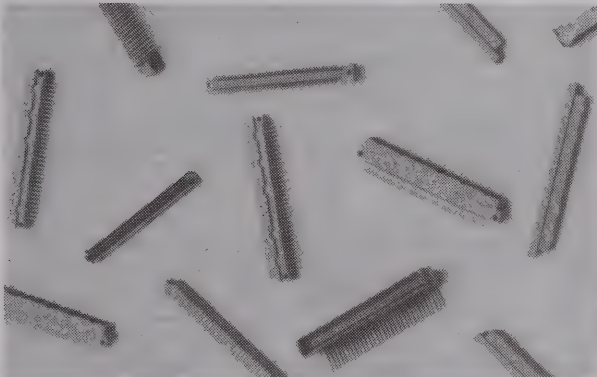
For applications that require quick, easy connections/disconnections, choose from the industry's most complete line of headers and pin strips. From our new .050 inch minis to the .100 inch standard, 3M header products increase your design flexibility and compliment our socket connector line.

Plug Connectors



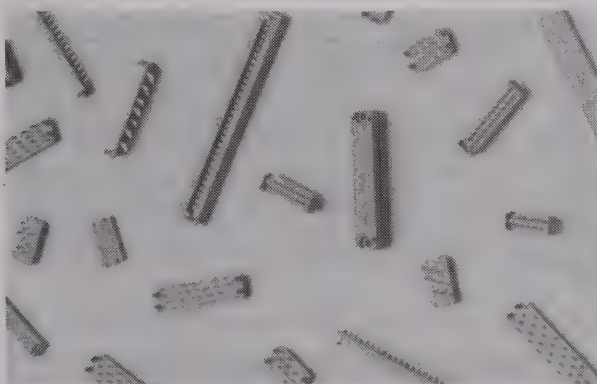
3M plug connectors can be used with either flat cable or discrete wires and are the ideal interface for standard sockets. Plug connectors are available with or without mounting flanges and lock/eject latches which positively secure a mating socket connector.

DIN Connectors



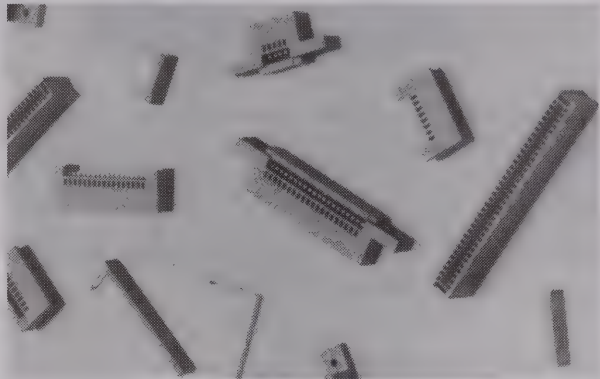
These boardmount sockets and headers form a two-piece mating system conforming to DIN specification 41612. Use them where you need high density in tight spaces: they'll easily replace one-piece card-edge connectors in rack-and-panel applications, increasing design flexibility.

PCB Connectors



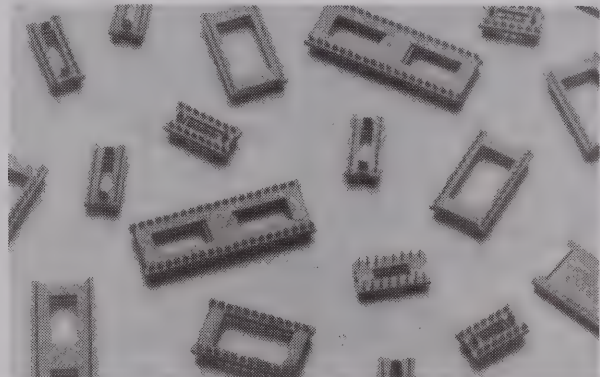
For transitions from flat cable or discrete wire to PC board, regardless of the position, choose our PCB connectors. They're soldered to the board, creating a fixed connection that can be assembled to flat cable either before or after soldering.

Card-Edge Connectors



Our Card-Edge Connectors mate with printed wiring leads running to the edge of a printed circuit board on one or both sides. The .100 inch version is available in 10 through 64 contact positions with or without mounting flanges.

DIP Connectors



Make a quick, simple, solderless connection using DIP connectors in a range of positions: 14, 16, 18, 24, 28, and 40. These connectors mate with standard IC sockets or can be soldered directly onto a PC board, conserving board real estate by offering direct interboard bussing.

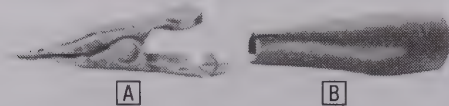
D Sub Connectors



3M D Sub Connectors are designed for I/O applications. They provide reliable mating with a variety of options.

CALL US FOR A FREE 3M CATALOG.

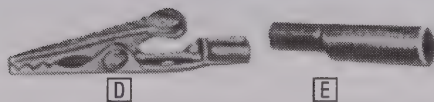
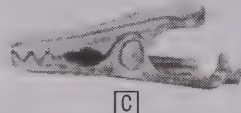
34 SERIES MICRO-GATOR CLIPS



Smooth jawed clip with a microscopic tip and semi-tubular rivet provides maximum hinge protection. Special nose slot permits full jaw opening.

Mfr. No.	Fig.	Description	Length (in.)	Price Each
34	A	Plated steel Micro-gator	1 ³ / ₃₂	\$0.60
34-C	A	Solid copper Micro-gator	1 ³ / ₃₂	.63
36	B	Vinyl insulator for 34, 34C	1 ⁷ / ₃₂	.20

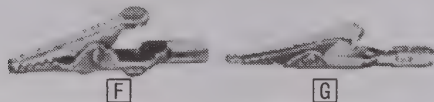
MINI-GATOR CLIPS



Clip Nos. 30 and 30C have full-meshing teeth that grip the finest wires; strong spring action for penetrating protective coatings. 30BL is steel plated clip with full-meshing teeth, rivet hinge, and rolled barrel tail section. 30TBO is steel plated clip with threaded steel barrel that allows connection to any 6-32 threaded male test prod. #31 is specially designed for 30BL:30TBO that covers entire clip except nose.

30	C	Plated steel Mini-gator	1 ³ / ₃₂	\$0.33
30-BL	D	Plated steel with rolled-barrel tail section	1 ¹ / ₄	.33
30-TBO	D	Plated steel with 6-32 threaded barrel	1 ¹ / ₂	.65
30-C†	C	Solid copper Mini-gator	1 ³ / ₃₂	.43
31	E	Vinyl insulator for 30-BL, 30-TBO*	1 ⁵ / ₁₆	.35
32	B	Vinyl insulator for 30, 30-C*	1 ⁷ / ₃₂	.20

60 SERIES ALLIGATOR CLIPS



Standard alligator clips Nos. 60 and 60X feature a convenient knurled thumb grip and barrel construction for banana plug. These alligator clips with a 6-40 screw eliminate soldering or crimping. No. 60PR is an alligator clip with a barrel formed to accept standard phone tip or test prod tip. 60HPR includes insulated acetate handle. No. 60TBO is the newest alligator clip configuration available with a threaded steel barrel added. No. 60HS and 60CHS are alligator clips in steel or copper equipped with insulating acetate handles.

UNINSULATED 60 SERIES

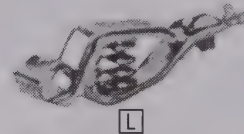
Mfr. No.	Fig.	Term. Type	Description	Length (in.)	Price Each
60	F	Solder	Plated steel	1 ³ / ₃₂	\$0.40
60-TBO	G	8-32	Plated steel with 8-32 threaded barrel	2 ¹ / ₁₆	.83
60-S	F	Screw	Plated steel	1 ³ / ₃₂	.53
60HPR	...	...	Steel, insulated handle	2 ¹⁵ / ₆₄	.80
60-CS†	F	Screw	Solder copper	1 ³ / ₃₂	.75
60PR-2	H	...	Plated steel	1 ³ / ₃₂	.63
62	I	...	Vinyl insulator* for the 60 Series	2 ¹ / ₃₂	.20

Test and Battery Clips

INSULATED 60 SERIES

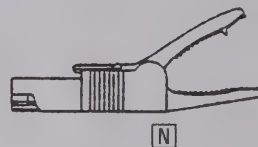
Mfr. No.	Fig.	Term. Type	Description	Length (in.)	Price Each
60-HS	J	Screw	Plated steel; insulated barrel*	2 ¹ / ₃₂	\$0.70
60-CHS†	J	Screw	Solid copper; insulated barrel*	1 ³ / ₃₂	.93
63	K	Screw	Plated steel; fully insulated*	2 ¹ / ₄	1.05
63-C	K	Screw	Solid copper; fully insulated*	2 ¹ / ₄	1.18

PEE-WEE CLIPS



Mfr. No.	Fig.	Description	Length (in.)	Price Each
45	L	Plated steel Pee-Wee clip	1 ¹⁷ / ₃₂	\$0.58
45-C†	L	Solid copper Pee-Wee clip	1 ¹⁷ / ₃₂	.80
47	...	Vinyl insulator* for 45 and 45C	2 ¹ / ₆₄	.30

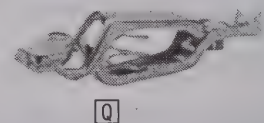
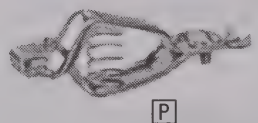
CROCODILE CLIPS



Crocodile clips are used for test work in close quarters, with nesting teeth giving solid contact.

Mfr. No.	Fig.	Length (in.)	Jaws Open (in.)	Amps	Material	Price Each
65	M	3.75	—	—	Plated Brass	...
66	N	1.50	—	—	Plated Brass	...
85	O	2 ¹ / ₄	1 ⁵ / ₁₆	10	Steel plated	\$0.63
85-C†	O	2 ¹ / ₄	1 ⁵ / ₁₆	10	Solid copper	.98
87	...	...	...	...	Vinyl Insulator for 85 and 85C	.38

GENERAL PURPOSE TEST CLIPS

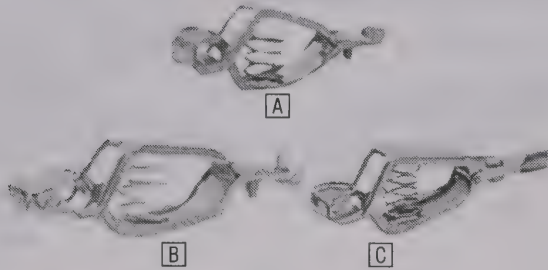


Mfr. No.	Fig.	Length (in.)	Jaws Open (in.)	Amps	Material	Price Each
48-B	P	2	1/2	10	Plated steel	\$0.80
48-B-2E	...	2	3/4	10	Plated steel	.70
48-C†	P	2	1/2	10	Solid copper	.90
49	...	2 ⁹ / ₃₂	...	...	Vinyl	.60
27	Q	2 ⁷ / ₁₆	3/8	...	Plated steel	.93
27-C†	Q	2 ⁷ / ₁₆	3/8	40	Solid copper	1.25
29	...	3 ¹ / ₂	...	...	Vinyl	.73

Specify red or black; also available in yellow, blue, white or green, priced slightly higher. †Fed. Spec. W-C-4406, Aug. 11, 1970.

OUR GOAL IS PROVIDING QUALITY PRODUCTS AND SERVICES TO MEET YOUR NEEDS.

HEAVY-DUTY TEST AND BATTERY CLIPS



No. 24A: Steel clip with copper shunt that has teeth on one jaw and notch on the other allows it to stand erect on battery post.

No. 25, 25C: Clip with teeth meshing on all three sides of jaw; copper version has copper shunt added to eliminate overheating of spring. No. 25 is steel plated, 25C is solid copper.

No. 26: Flexible, vinyl insulator used with 24A, 25, 25C and 80.

No. 21A, 21C: Heavy duty clips with pin hinge construction that gives great mechanical strength. Copper version equipped with removable copper lug for attachment of cable. No. 21A is zinc plated with copper shunt; No. 21C is solid copper.

No. 23: Flexible, vinyl insulator used with 21A and 21C.

No. 11A, 11C: Clips with improved pin hinge construction designed for fast chargers and heavy ground requirements. 11A is zinc plated with copper shunt. 11C is solid copper with copper shunt.

No. 33C: Largest clip in Mueller line. Solid copper equipped with a solid copper lug and copper shunt.

No. 35: Flexible, vinyl insulator used with 33C.

No. 55, 95: Economy steel plated clips with meshing teeth at front of jaw featuring interlocking neck construction.

No. 80: A lighter construction steel plated clip, with interlocking neck design.

Mueller No.	Fig.	Length (in.)	Jaws Open (in.)	Cap., Amps	Material	Price Each
24-A	A	2 ⁷ / ₈	3/4	25	Steel	\$1.48
25	B	3	3/4	40	Steel	1.25
25-C†	B	3	3/4	75	Copper	2.03
21-A	A	4 ⁷ / ₆₄	1 ¹ / ₁₆	50	Steel	2.53
21-C†	C	4 ¹ / ₂	1 ¹ / ₁₆	100	Copper	4.94
11-A	C	6	1 ⁵ / ₈	100	Steel	6.69
11-C†	C	6	1 ⁵ / ₈	200	Copper	8.85
26	...	Vinyl Insulator for 24-A, 25 or 25-C*				1.05
23	...	Vinyl Insulator* for #21A or #21C				1.63
13	...	Vinyl Insulator for 11-A or 11-C*				3.08

PLIER-TYPE BATTERY CLIPS



Hippo-Clip: For battery booster cables and fast chargers. Furnished with red or black vinyl handle insulators. 6" long. Marked for polarity.

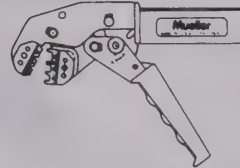
Pigmy-Hippo Clip: Exclusive built-in solder-strap and clinching ears for convenient wire attachment. High quality plated spring. Large, 1¹/₂" jaw spread. Furnished with red or black vinyl handle insulators. 3" long.

Mueller No.	Fig.	Description	Price Each
41-A	D	Hippo-Clip, steel, bright copper-plated, 200 amps*	\$4.29
41-C†	D	Hippo-Clip, solid copper construction, 400 amps*	9.15
44	E	Slim Jim clip, copper, 400 amps*	5.69
46-A	...	Pigmy-Hippo clip, steel, bright copper-plated, 50 amps*	1.33
46-C	...	Pigmy-Hippo clip, solid copper construction, 75 amps*	2.03

*Specify red or black; also available in yellow, blue, white or green, priced slightly higher.

†Fed. Spec. WC440B, Feb. 5, 1964.

CRIMP TOOL



No. 900: Designed for the professional, the Mueller hand-held crimp tool is the best commercial-grade full-cycle crimp tool available. Made of fine blanked high carbon steel for long tool life. Includes a positive ratcheting assembly, jaw opening orientation, molded finger and palm grips and interchangeable dies. Three individual stations that crimp up to 10 different types of clips to wires ranging from 14 AWG to 24 AWG.

Mueller Model 900 Hand Held Crimp Tool—Price Each..... \$124.00

111 CRIMP TOOL KIT



Kit contains 500 test clips, insulators and a hand held crimp tool for wires 14AWG to 24AWG. Contents: 1 #900 crimpers, 30 #30 clips, 30 #30C clips, 20 #32 insulators, 30 #30BL clips, 30 #30TBO clips, 20 #31 insulators, 20 #34 clips, 20 #34C clips, 20 #36 insulators, 20 #45 clips, 20 #45C clips, 20 #47 insulators, 20 #48B clips, 20 #48C clips, 20 #51C clips, 20 #55 clips, 20 #49 insulators, 30 #60 clips, 30 #60C clips, 20 #62 insulators, 20 #85 clips and 20 #87 insulators.

Mueller Model 111 Crimp Tool Kit—Price Each \$246.00

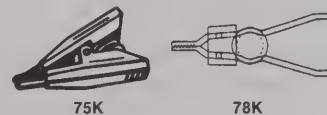
115 "CLIP BAR" MERCHANDISER



Ideal for tool rooms and tool cribs. Kit contains over 500 test clips and insulators. Contents: 40 #30 clips, 20 #30C clips, 40 #34 clips, 20 #32 insulators, 30 #36 insulators, 60 #45 clips, 20 #47 insulators, 80 #60 clips, 40 #60HS clips, 30 #60CS clips, 20 #60CHS clips, 40 #62 insulators, 10 #63 insulators, 40 #85 clips, 20 #87 insulators and 12 #201 micro clippers.

Mueller Model 115 "Clip Bar" Merchandiser—Price Each..... \$239.00

KELVIN CLIPS



No. 75-K: Features copper/silver contacts, slotted screw connections and maximum jaw opening of ⁵/₁₆". Max. wire size is #16AWG. Handles are glass-filled nylon. Color: Black. **No. 78-K:** Features gold plated copper contacts, allen head set screw connections, nylon fulcrum and max. jaw opening of 1". Maximum wire size is #16AWG. Handles are glass-filled nylon.

Mueller Model 75-K Kelvin Clip — Price Each \$13.23

Mueller Model 78-K Kelvin Clip — Price Each \$52.63

**CAN'T FIND THE EXACT PART YOU NEED?
CALL US FOR ASSISTANCE.**

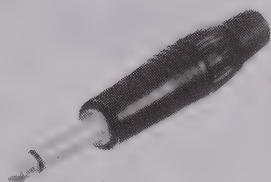


NEUTRIK

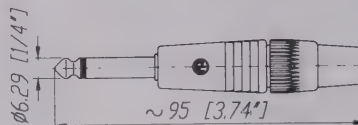
CONNECTING THE WORLD

Plugs and Jacks

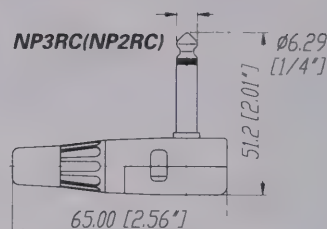
1/4" PROFESSIONAL
PHONE PLUGS
"The lifetime plug"
Robust die cast shell,
Neutrik unique chuck-type
strain relief with plastic
sleeve for optimal cable
protection.



NP2C(NP3C)



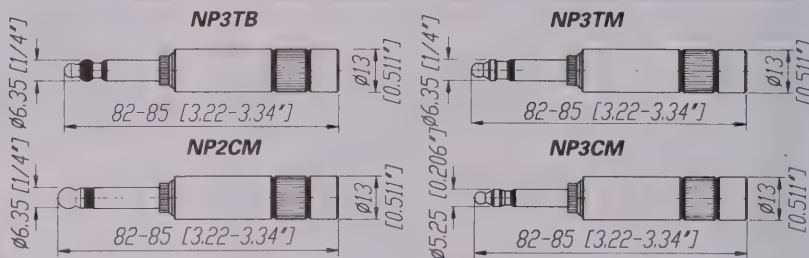
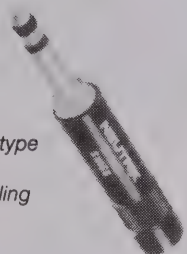
NP3RC(NP2RC)



Applicable Standard						
Shell Plating	Contacts	Terminations	Part Numbers	Special Versions	Compatibility	Wire size
Nickel	Nickel	Soldering	NP2C, NP3C	NP2C with built in 1:10 transformer to convert mike level to guitar inputs: add suffix "T10AA". Other colors for NP*C shell on request. Color I.D. boots available.	EIA RS 453	AWG 18
Black	Nickel	Soldering	NP2C-BAG			
Black	Nickel	Soldering	NP3C-BAG			
Nickel	Nickel	Soldering	NP2RC, NP3RC			
Black	Nickel	Soldering	NP2RC-BAG, NP3RC-BAG			

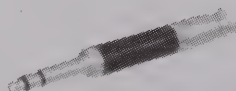
NEW

MIL/B-GAUGE-TYPE
PHONE PLUGS:
All metal design, chuck-type
strain relief, no rivets or
screws, meets all prevailing
standards.

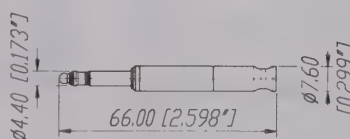


Applicable Standard						
Shell Plating	Contacts	Terminations	Part Numbers	Special Versions	Compatibility	Wire size
Black	Nickel	Soldering	NP3TB-B		B-GAUGE BPO316	AWG 18
Red	Nickel	Soldering	NP3TB-R			
Black	Nickel	Soldering	NP3TM-B		MIL-P-642/2	
Red	Nickel	Soldering	NP3TM-R			
Black	Nickel	Soldering	NP2CM-B		MIL-P-642/4	AWG 20
Red	Nickel	Soldering	NP2CM-R			
Black	Brass	Soldering	NP3CM-B		MIL-P-642/5A	
Red	Brass	Soldering	NP3CM-R			

0.173" (4.4mm)
BANTAM-TYPE
MINIATURE PLUGS
Very robust ergonomic
design, all metal.
Professional look and
performance. Crimp strain
relief.



NP3TT-1



NOTE: Gold contact version in combination with the NJ3TT jack eliminates contact problems due to corrosion / dirt buildup in existing products. -A version available with rubber boot in red or black.

Applicable Standard						
Shell Plating	Contacts	Terminations	Part Numbers	Special Versions	Compatibility	Wire size
Black	Nickel	Tip & ring: soldering sleeve: crimp	NP3TT-1-B	Assembly tool: HX-TT for assembling & crimping. Colored sleeves for identification	MIL-642/13	AWG 24
Red	Nickel		NP3TT-1-R			
Black	Hard Gold		NP3TT-1-BAu			
Red	Hard Gold		NP3TT-1-RAu (NEW)			



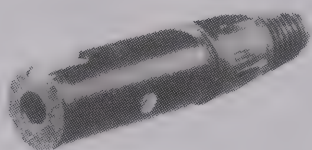
NEUTRIK

Plugs and Jacks

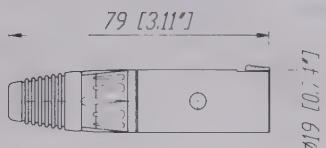
CONNECTING THE WORLD

LOCKING 1/4" CABLE-JACK

Mates with all mono or stereo plugs specified to EIA RS 453, provides secure lockable interconnection with latch release.



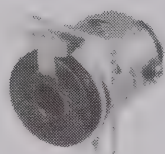
NJ3FC6



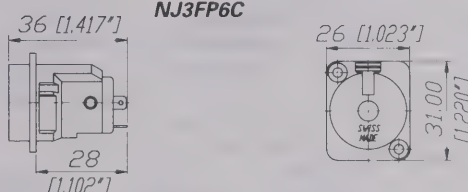
						Applicable Standard	Wire size
Shell Plating	Contacts	Terminations	Part Numbers	Special Versions	Compatibility		
Nickel	Silver	Soldering	NJ3FC6C		EIA RS 453		AWG 18
Black	Silver	Soldering	NJ3FC6C-BAG				

LOCKING 1/4" CHASSIS-JACK

Mates with all mono or stereo plugs specified to EIA RS 453, dimensionally compatible with D-Series hole cutout.



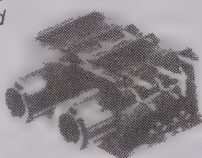
NJ3FP6C



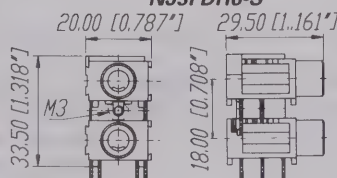
						Applicable Standard	Wire size
Shell Plating	Contacts	Terminations	Part Numbers	Special Versions	Compatibility		
Nickel	Silver	PCB-soldering	NJ3FP6C		EIA RS 453		AWG 18
Black	Silver		NJ3FP6C-BAG				
Black/Plastic	Silver		NJ3FP6P-BAG				

1/4" R.T. ANGLE P.C. JACKS

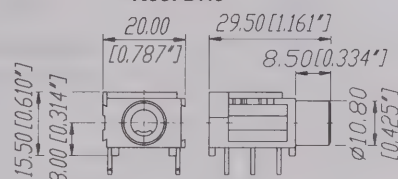
Separation of mechanical and electrical contacts provides a high retention force and low insertion pressure. The complete separation of the two functions makes gold plating possible. Mates with all mono or stereo plugs specified to EIA RS 453.



NJ3FDH6-S



NJ3FDH6

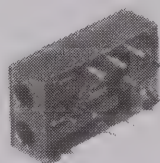


						Applicable Standard	Wire size
Shell Plating	Contacts	Terminations	Part Numbers	Special Versions	Compatibility		
Black/Plastic	Gold	PCB-soldering	NJ3FDH6		EIA RS 453		N/A
Black/Plastic	Gold		NJ3FDH6-T	With thread and nut			
Black/Plastic	Gold		NJ3FDH6-S	2 jacks stacked with thread and nut			
Black/Plastic	Gold		NJ3FDH6-ST	2 jacks stacked with thread and nut			

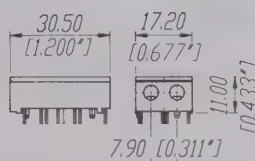
0,173" (4,4mm)

BANTAM (Tiny Telephone) MINIATURE P.C. JACK
Pre-assembled as one pair or two pairs stacked back to back. Same design features as 1/4" jack.

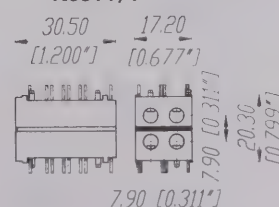
NEW



NJ3TT/2



NJ3TT/4



						Applicable Standard	Wire size
Shell Plating	Contacts	Terminations	Part Numbers	Special Versions	Compatibility		
Black/Plastic	Gold	PCB-soldering	NJ3TT/2				N/A
Black/Plastic	Gold		NJ3TT/4				



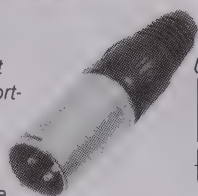
NEUTRIK

CONNECTING THE WORLD

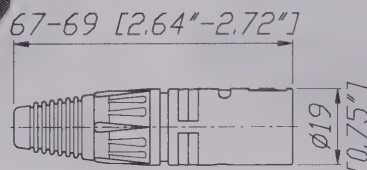
Connectors

X-SERIES:

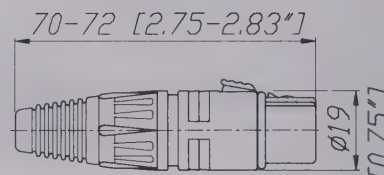
The worldwide accepted standard. Rugged die cast shell, compact design (shortest available XLR cable connector). Time saving assembly: 4 parts only, no screws. Unique chuck type strain relief.



NC*MX



MC*FX

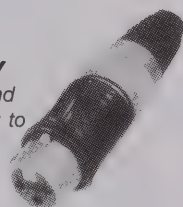


Shell	Contacts	Male	Female	Special Versions	Applicable Standard Compatibility	Wire size
Nickel	Silver	NC*MX	NC*FX	Suffix D: disassembled kit version (3-pole FX/MX-nickel, -B and -BAG) Colored sleeves: ***	IEC tentative standard	3 pole
Black	Silver	NC*MX-BAG	NC*FX-BAG		Switchcraft QG	AWG 16
Black	Gold	NC*MX-B	NC*FX-B		Cannon XLR	4-6 pole AWG 18
Nickel	Silver	NC6MSX	NC6FSX		Switchcraft QG (not according to IEC 6pole) use SX version	7 pole
Black	Silver	NC6MSX-BAG	NC6FSX-BAG			AWG 20
Black	Gold	NC6MSX-B	NC6FSX-B			

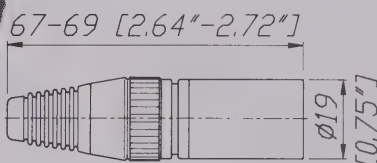
*:3 - 7 pole

TYPE - HD HEAVY DUTY

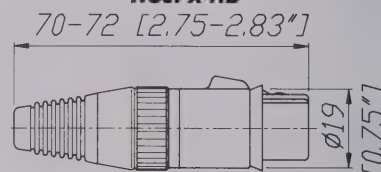
All metal design, dust and water protected according to IP65



NC3MX-HD



NC3FX-HD



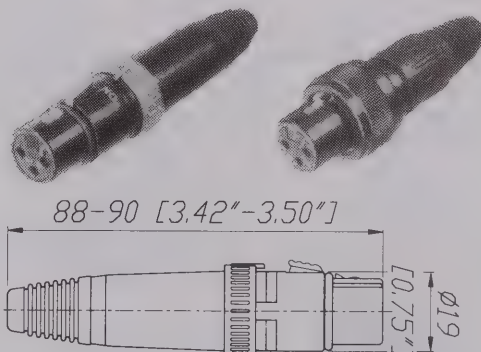
Shell	Contacts	Male	Female	Special Versions	Applicable Standard Compatibility	Wire size
Stainless Steel (F)	Gold	NC3MX-HD	NC3FX-HD	HD - Contact variations are available in U.S.A. on a special basis. Contact product manager for details.		AWG 16
Steel-black	Gold	NC3MX-HD-B	NC3FX-HD-B			

TYPE-SPEC. DIGITAL

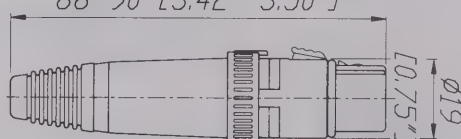
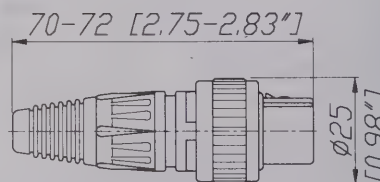
Locking ring provides a high security connection. Guaranteed uninterrupted HF-screening makes it suitable for **digital** format transmissions.

TYPE-FXS

Noiseless on-off switch short circuits contacts 2 + 3.



NC3FX-SPEC.

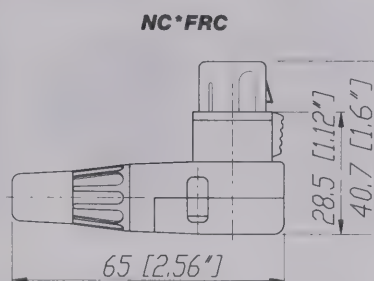
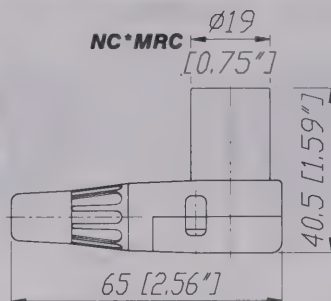


NC3FXS

Shell	Contacts	Male	Female	Special Versions	Applicable Standard Compatibility	Wire size
Nickel	Gold		NC3FXS			AWG 16
Black	Gold		NC3FXS-B			
Black	Gold		NC3FX-Spec.			

RC-SERIES

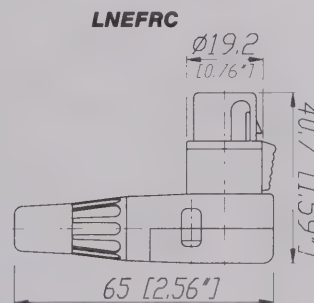
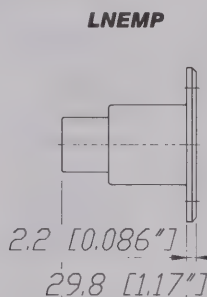
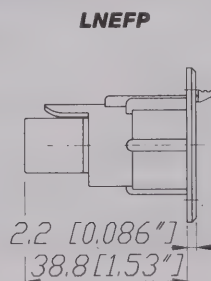
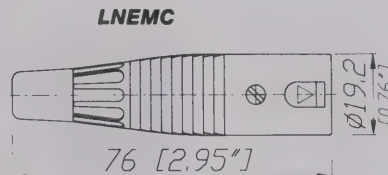
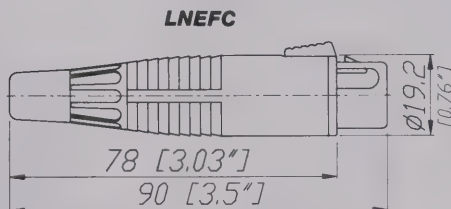
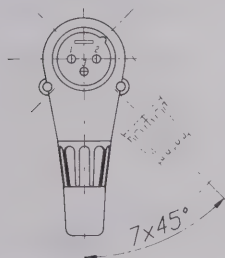
Compact low profile right angle connectors. 7 x 45° indexing of main body allows highest packaging density. Chuck type cable clamp.



Shell	Contacts	Male	Female	Special Versions	Applicable Standard Compatibility	Wire size
Nickel	Silver	NC**MRC	NC**FRC		IEC tentative standard	
Black	Gold	NC**MRC-B	NC**FRC-B		Switchcraft QG	
Black	Silver	NC**MRC-BAG	NC**FRC-BAG		Cannon XLR	
		** : 3 - 6 pole				

LNE-SERIES

Rugged locking mains connectors for industrial and medical electronics, where a fail proof mains connector is of vital importance. Excellent cable protection, simple assembly and compact right angle versions. Locking feature. Flammability UL 94: V-0 SEV-approved

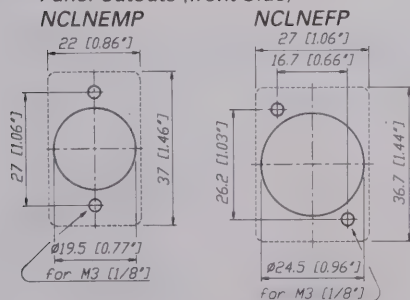


LNEMRC:
dimensional drawings see NC3MRC

Applicable Standard	Wire size
Cannon XLR-LNE	AWG 20

Shell	Contacts	Male	Female
Nickel	Silver	LNEMC	LNEFC
Nickel	Silver	LNEMRC	LNEFRC
Nickel	Silver	LNEMP	LNEFP

Panel Cutouts (front Side)



Version with smaller mechanical dimension on request
*** according to resistor color code. order Nr:
BSX — brown = 1
red = 2
orange = 3
yellow = 4
green = 5
blue = 6
violet = 7
grey = 8
white = 9



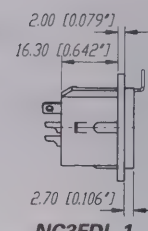
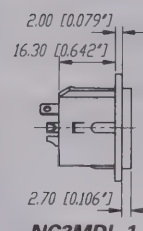
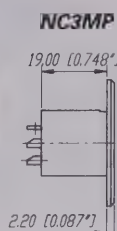
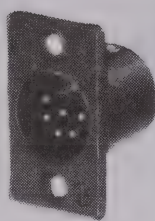
NEUTRIK

CONNECTING THE WORLD

Receptacles

P-SERIES:
smallest available
"classics".

D-L-SERIES:
unified metal shell
for male
and female.
RF-protected.
Solder cups.

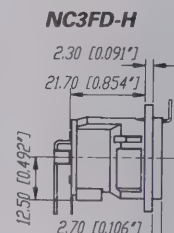
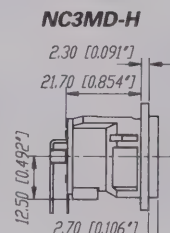
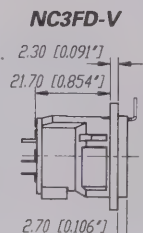
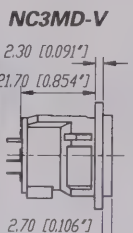
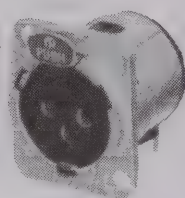


Shell	Contacts	Terminations	Male	Female	Special Versions	Compatibility
Nickel	Silver	Hardwire soldering, large soldering cups.	NC**MP	NC*FP-1	Females: Retention spring instead of latch:	Switchcraft
Black	Gold		NC**MP-B	NC*FP-B-1		D*M
Black	Silver		NC 3MP-BAG	NC3FP-BAG-1		D*F
Nickel	Silver		NC*MDL-1	NC*FDL-1		Cannon
Black	Gold		NC*MDL-B-1	NC*FDL-B-1		XLR*32
Black	Silver		NC*MDL-BAG-1	NC*FDL-BAG-1		XLR*31
						Dimensionally

*: 3-7 pole

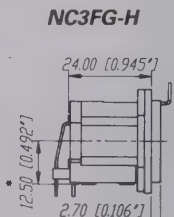
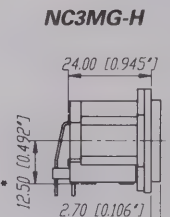
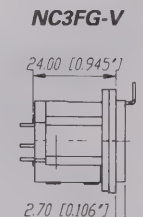
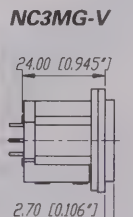
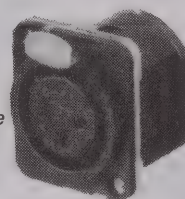
** : 3-6 pole

D-SERIES:
unified metal shell
for male and female.
Insert premounted
to PCB, shell to
enclosure, front
locked/unlocked.
RF-protected.



Shell	Contacts	Terminations	Male	Female	Special Versions	Compatibility
Nickel	Silver	Vertical to PCB	NC3MD-V	NC3FD-V		Switchcraft
Black	Gold		NC3MD-V-B	NC3FD-V-B		E-series
Black	Silver		NC3MD-BAG	NC3FD-BAG		
Nickel	Silver	Parallel to PCB	NC3MD-H	NC3FD-H	Mounting holes with M3 threads: add suffix "M3"	
Black	Gold		NC3MD-H-B	NC3FD-H-B		
Black	Silver		NC3MD-H-BAG	NC3FD-H-BAG		
(Wave-) soldering						

G-SERIES
(GC-SERIES):
"One piece", rear
mount version of
D-series. Steel-frame
reinforced,
M3-thread screw
holes.



*1 GC-Series 15,00 [0.591"]

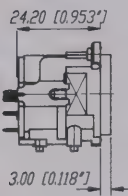
Shell	Contacts	Terminations	Male	Female	Special Versions	Compatibility
HD-Zytel GR steel reinforced	Silver	Vertical to PCB	NC3MG-V			G-SERIES:
	Gold			NC3FG-V		Switchcraft
						E-series
	Silver	Parallel to PCB	NC3MG-H			Neutrik D-series
	Gold			NC3FG-H		GC-SERIES:
	(Wave-) soldering					
			Fully compatible with Cannon XLB- series, Switchcraft PQG-series.			

K-SERIES:

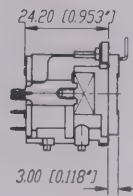
a new extremely versatile and cost effective concept. Metal brackets secure the socket to the PCB, machine insertable. M3-thread screw holes.



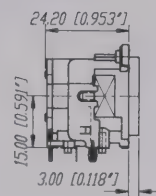
NC3MK-V



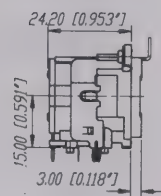
NC3FK-V



NC3MK-H



NC3FK-H



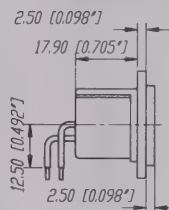
Shell	Contacts	Terminations	Male	Female	Special Versions	Compatibility
HD-Zytel GR	Silver Gold	Vertical to PCB	NC3MK-V	NC3FK-V	Versions without brackets: contact factory	Cannon XLB Switchcraft PQG
	Silver Gold	Parallel to PCB (Wave-) soldering	NC3MK-H	NC3FK-H		

R-SERIES:

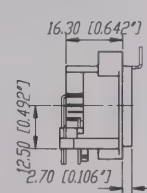
Smallest size, lowest cost. Smallest available XLR-sockets, with or without latch and ground pin. Gold contacts on female.



NC3MPR-H



NC3FPR-H



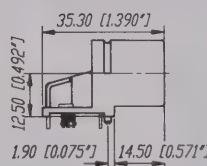
Shell	Contacts	Terminations	Male	Female	Special Versions	Compatibility
HD-Zytel GR	Silver Gold	Parallel to PCB, positioning pins (Wave-) soldering	NC3MPR-H	NC3FPR-H	Females: Retention spring instead of latch: suffix "O", no ground contact. Vertical versions: contact factory	Re-an Switchcraft Cliff

E-SERIES:

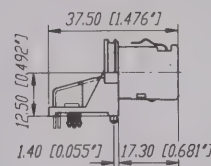
minimum weight direct to the PCB, right angle sockets. Escutcheon available. Gold contacts on female.



NC3ME-H



NC3FE-H



NHE



Shell	Contacts	Terminations	Male	Female	Special Versions	Compatibility
HD-Zytel GR	Silver	Parallel to PCB, positioning pins	NC3ME-H		Accessory: snap-on escutcheon	Switchcraft RAP-series
	Gold			NC3FE-H	NHE with mounting holes for self tapping screws.	
		(Wave-) soldering				

SOLDERLESS TERMINALS AND SPLICES



Ring



Spade



Butt Splice



Knife Splice



Spring Spade



Flanged Spade



FASTON Tab

PIDG/PLASTI-GRIP INSULATED TERMINALS AND SPLICES

PIDG: Color coded; secure insulation grip; abrasion, corrosion, and vibration resistant; maximum contact and tensile strength after crimping; meets MIL-T-7928, Type II, Class 1 and 2. **PLASTI-GRIP:** Color coded; corrosion resistant; maximum contact and tensile strength.

RING TERMINALS

Wire Size	AMP No.			
	PIDG Loose Piece	Price per 100	Plasti-Grip Loose Piece	Price per 100
22-16	31880	★	34141	★
	31885	★	34142	★
	31890	★	34145	★
	31891	★	34146	★
	31894	★	34150	★
16-14	31895	★	34151	★
	31897	★	34152	★
	32441	★	.....	★
	32442	★	34158	★
	31902	★	34160	★
12-10	31903	★	34161	★
	31906	★	34162	★
	31907	★	34163	★
	31909	★	34164	★
	35149	★	34852	★
	35108	★	34853	★
	35109	★	34854	★
	35110	★	34855	★
	35111	★	34856	★
	35112	★	34173	★
	35151	★	34837	★

SPADE TERMINALS

22-16	34541	★	320665	★
	32053	★	34155	★
	32054	★	34156	★
16-14	35559	★	322994	★
	32509	★	34166	★
	32060	★	34167	★
12-10	322985	★	.....	★
	32588	★	34857	★
	32589	★	34176	★

FLANGED SPADE TERMINALS

Wire Size	AMP No.			
	PIDG Loose Piece	Price per 100	Plasti-Grip Loose Piece	Price per 100
22-16	32562	★	322249	★
	32498	★	324169	★
	.....	★	328516	★
16-14	320861	★	324165	★
	320862	★	.....	★
12-10	324587	★	324581	★
	32510	★	324172	★
	324015	★	328516	★

SPRING SPADE TERMINALS

22-16	52929	★	52949	★
	52930	★	52950	★
	52931	★	52951	★
16-14	52935	★	52955	★
	52936	★	52956	★
	52937	★	52957	★
12-10	52941	★	52961	★
	52942	★	52962	★
	52943	★	.....	★

FASTON TABS .032

22-16	66023-2	★	.....	★
16-14	66024-2	★	.....	★

BUTT SPLICES

22-16	320559	★	34070	★
16-14	320562	★	34071	★
12-10	320570	★	34072	★

KNIFE SPLICES

22-16	32446	★	.....	★
16-14	32448	★	.....	★

CATALOGS ARE AVAILABLE FOR ALL OF THE BRANDS WALDOM SELLS. CALL US FOR COMPLETE INFORMATION ON:

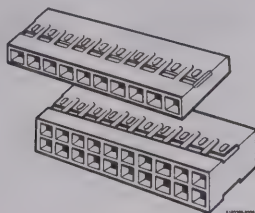
- AMP
- BERG*
- CHERRY*
- CHICAGO MINIATURE
- CINCH
- CORNELL DUBILIER
- CRYDOM*
- ELECTROSWITCH

- GRAYHILL
- INTERFAN
- MOLEX
- MOLEX-ETC
- PHILIPS COMPONENTS
- POWER-ONE*
- SPEEDY-TYS
- WALDOM HARDWARE

* New from Waldom

★ PRICING ON REQUEST

SINGLE & DOUBLE ROW MINI LATCH HOUSING



Housings on .100" (2.54) centers. Stackable end to end and side to side. Accept crimp to wire mini PV terminals range 22-36 AWG and crimp to wire male pins 22-32 AWG. Rated UL94V-1. Order polarizing plug 65307-001 separately.

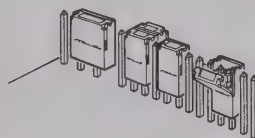
Mfr. No.	Position	Housing Width In.(mm)	Price Each
65039 SERIES SINGLE ROW, 0.100" (2.54) CENTER			
65039-035	2	0.200 (95.08)	\$0.62
65039-034	3	0.300 (7.62)	.65
65043 SERIES DOUBLE ROW, 0.100" (2.54) CENTERS			
65043-035	6	0.200 (5.08)	\$1.04
65043-032	10	0.500 (12.70)	1.42
65043-027	20	1.000 (25.40)	2.26

POLARIZATION PLUGS



For use with mini latch housings. UL recognized. Sold in packages of 10. Mfr. No. 65307-001 Polarization Plug—Price Each \$0.21

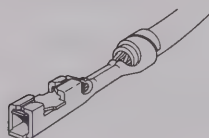
MINI-JUMP JUMPERS



Two position shunts stackable on 0.100" (2.54) centimeters. Mate with 0.025" (0.635) square and round pins. UL recognized. CSA certified. Type 65474-002 is plated 30μ gold.

Mfr. No.	Price Each
65474-001	\$0.79
65474-005	.85
65474-002	.48
65474-010	.59

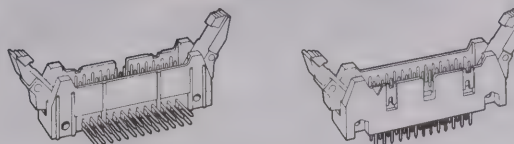
CRIMP-TO-WIRE MINI-PV RECEPTACLES



For use with mini-latch housings. Mate with 0.25" square pins. **Current Rating:** 3A continuous. UL recognized. CSA certified except for those with 15μ plating.

Mfr. No.	AWG	Spring Force	Plating (In.)	Price Each
48252-000	28,30,32	Standard	15μ	\$0.43
48266-000	18,20	Standard	30μ	.46
48235-000	22,24,26	Standard	30μ	.46
47743-000	22,24,26	Standard	40μ	.56
48254-000	Two 26	High	15μ	.43
48234-000	Two 26	High	30μ	.46
47712-000	Two 26	High	40μ	.56
47745-000	Two 28	High	40μ	.56
48236-000	Two 28	Ultra High	30μ	.46
48239-000	Two 32	Ultra High	30μ	.46

QUICKIE III STRAIGHT HEADERS WITH STANDARD LATCH



Four walled shielding protects pins and prevents misalignment. Dual function latches lock and eject mated connector. Header features double-plated phosphor bronze pins with two sided plating in contact area: contact sides of pin, plated 30μ inch GXT. Polarization achieved by cutting off pin and adding polarization plug to mating Quickie III female connector.

Mfr. No.	Positions	Width (In.)	Price Each
71918-106	2 × 3	1.060	\$1.39
71918-108	2 × 4	1.160	1.49
71918-110	2 × 5	1.260	1.58
71918-114	2 × 7	1.460	1.78
71918-116	2 × 8	1.560	1.87
71918-118	2 × 9	1.660	2.00
71918-120	2 × 10	1.760	2.10
71918-126	2 × 13	2.060	2.42
71918-134	2 × 17	2.460	2.81
71918-140	2 × 20	2.760	3.23
71918-144	2 × 22	2.960	3.52
71918-150	2 × 25	3.260	3.94
71918-160	2 × 30	3.760	4.55
71918-164	2 × 32	3.960	4.81
71912-150*	2 × 25	3.260	4.42

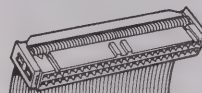
*Gold over nickel.

QUICKIE II IDC RECEPTACLES

Pre-loaded cover reduces time and cost by eliminating assembly to base. Dual entry cover enables insertion of cable from both sides. Double scalloped cable slot assists accurate positioning of the cable over contacts. Blue, glass filled thermoplastic polyester UL94-V-O. **Temperature Range:** -65°C to +105°C. **Withstanding Voltage:** > 1000 VAC rms (sea level). Phosphor bronze contact finish of 30μ". **Current Rating:** 1A. Include strain relief.

Mfr. No.	Position	Width (In.)	Price Each
66900-220	10	1.180	\$2.49
66900-226	13	1.480	3.20
66900-234	17	1.880	4.10
66900-240	20	2.180	4.58
66900-250	25	2.680	5.45

QUICKIE III FEMALE CONNECTORS



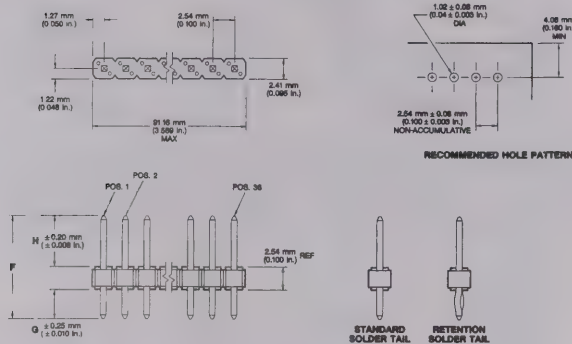
Pre-loaded adjustable bride type cover reduces assembly time, protects contacts and offers precise cover to base alignment. Feed through design allows cable to be inserted either side of connector for cable end terminations. Allows connector to pass smoothly over cable for daisy chain applications. Serrated slots assure accurate positioning of cable over contacts during assembly. **Grid:** 0.100". Gray, glass filled thermoplastic polyester body rated UL94-V-O. **Temperature Range:** -65°C to +125°C. **Withstanding Voltage:** 100 Vrms. Phosphor bronze contact finish of 30μ" GXT over pre-plated nickel. **Current Rating:** 1A. Include strain relief.

Mfr. No.	Positions	Width (In.)	Price Each
DUAL POLARIZATION			
71602-306	2 × 3	0.325	\$0.94
71602-308	2 × 4	0.425	1.00
71602-310	2 × 5	0.525	.94
71602-314	2 × 7	0.725	1.10
71602-316	2 × 8	0.825	1.20
71602-318	2 × 9	0.925	1.33
71602-320	2 × 10	1.025	1.45
71602-326	2 × 13	1.325	1.84
71602-334	2 × 17	1.725	2.36
71602-340	2 × 20	2.025	2.62
71602-344	2 × 22	2.225	2.81
71602-350	2 × 25	2.525	3.10
71602-360	2 × 30	3.025	3.52
71602-364	2 × 32	3.225	3.68

CENTRAL AND DUAL POLARIZATION

Mfr. No.	Positions	Width (In.)	Price Each
71602-010	2 × 5	0.525	\$0.94
71602-014	2 × 7	0.725	1.10
71602-016	2 × 8	0.825	1.20
71602-018	2 × 9	0.925	1.33
71602-020	2 × 10	1.025	1.45
71602-026	2 × 13	1.325	1.84
71602-034	2 × 17	1.725	2.36
71602-040	2 × 20	2.025	2.62
71602-044	2 × 22	2.225	2.81
71602-050	2 × 25	2.525	3.10
71602-060	2 × 30	3.025	3.52
71602-064	2 × 32	3.225	3.68

STRAIGHT 1-ROW BERGSTIK® II HEADERS



68000 SERIES

Pin Length: Below plastic (G) 2.41mm (0.095 in.)
Above plastic (H) 5.84mm (0.230 in.)
Overall (F) 10.80mm (0.425 in.)

Mfr. No.	Price Each	Mfr. No.	Price Each	Mfr. No.	Price Each
68000-101*	\$0.10	68000-203†	\$0.29	68000-436‡	\$1.49
68000-102*	.20	68000-207†	.66	68000-501§	.08
68000-103*	.31	68000-208†	.76	68000-502§	.16
68000-106*	.61	68000-236†	3.20	68000-503§	.24
68000-107*	.71	68000-401†	.05	68000-507§	.56
68000-108*	.81	68000-402†	.09	68000-508§	.64
68000-136*	3.39	68000-403†	.14	68000-536§	2.68
68000-201†	.10	68000-407†	.32	68000-603#	.27
68000-202†	.19	68000-408†	.37	68000-636#	3.00

68001 SERIES

Pin Length: Below plastic (G) 3.05mm (0.120 in.)
Above plastic (H) 5.84mm (0.230 in.)
Overall (F) 11.43mm (0.450 in.)

Mfr. No.	Price Each	Mfr. No.	Price Each	Mfr. No.	Price Each
68001-101	\$0.10	68001-205†	\$0.47	68001-416‡	\$0.71
68001-102*	.20	68001-206†	.57	68001-436‡	1.49
68001-103*	.31	68001-207†	.66	68001-501§	.08
68001-104*	.41	68001-216†	1.51	68001-502§	.16
68001-105*	.51	68001-236†	3.20	68001-503§	.24
68001-106*	.61	68001-401†	.05	68001-504§	.32
68001-107*	.71	68001-402†	.09	68001-505§	.40
68001-116*	1.62	68001-403†	.14	68001-506§	.48
68001-136*	3.39	68001-404†	.18	68001-507§	.56
68001-201†	.10	68001-405†	.22	68001-516§	1.28
68001-202†	.19	68001-406†	.28	68001-536§	2.68
68001-203†	.29	68001-407†	.31	68001-636#	3.00
68001-204†	.37				

68002 SERIES

Pin Length: Below plastic (G) 3.81mm (0.150 in.)
Above plastic (H) 5.84mm (0.230 in.)
Overall (F) 12.19mm (0.480 in.)

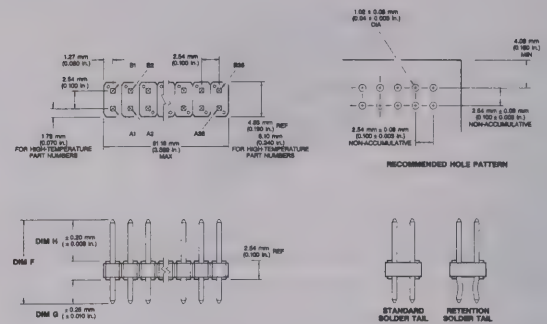
Mfr. No.	Price Each	Mfr. No.	Price Each	Mfr. No.	Price Each
68002-136*	\$3.87	68002-436‡	\$1.84	68002-636#	\$3.23
68002-236†	3.23	68002-536§	3.00		

7800 SERIES

Pin Length: Below plastic (G) 3.05mm (0.120 in.)
Above plastic (H) 8.08mm (0.318 in.)
Overall (F) 13.67mm (0.538 in.)

Mfr. No.	Price Each	Mfr. No.	Price Each
78511-436‡	\$1.49	78511-636#	\$3.00

STRAIGHT 2-ROW BERGSTIK® II HEADERS



67996 SERIES

Pin Length: Below plastic (G) 2.41mm (0.095 in.)
Above plastic (H) 5.84mm (0.230 in.)
Overall (F) 10.80mm (0.425 in.)

Mfr. No.	Price Each	Mfr. No.	Price Each	Mfr. No.	Price Each
67996-102*	\$0.23	67996-216†	\$1.51	67996-472‡	\$2.97
67996-106*	.70	67996-218†	1.69	67996-502§	.16
67996-108*	.93	67996-234†	3.20	67996-506§	.48
67996-116*	1.86	67996-272†	6.35	67996-508§	.64
67996-118*	2.10	67996-402†	.09	67996-516§	1.28
67996-134*	3.96	67996-406†	.28	67996-518§	1.45
67996-172*	7.77	67996-408†	.37	67996-534§	2.72
67996-202†	.19	67996-416†	.73	67996-572§	5.29
67996-206†	.57	67996-418†	.82	67996-672#	5.94
67996-208†	.76	67996-434‡	1.54		

67997 SERIES

Pin Length: Below plastic (G) 3.05mm (0.120 in.)
Above plastic (H) 5.84mm (0.230 in.)
Overall (F) 11.43mm (0.450 in.)

Mfr. No.	Price Each	Mfr. No.	Price Each	Mfr. No.	Price Each
67997-102*	\$0.23	67997-216†	\$1.51	67997-440‡	\$1.81
67997-104*	.47	67997-220†	1.88	67997-450‡	2.27
67997-106*	.69	67997-227†	2.45	67997-472‡	2.97
67997-108*	.94	67997-232†	3.01	67997-502§	.16
67997-114*	1.78	67997-240†	3.76	67997-504§	.32
67997-116*	1.87	67997-250†	6.35	67997-506§	.48
67997-120*	2.30	67997-272†	4.70	67997-508§	.64
67997-126*	2.99	67997-402†	.08	67997-514§	1.12
67997-132*	4.52	67997-404†	.18	67997-516§	1.28
67997-140*	4.68	67997-406†	.27	67997-520§	1.60
67997-150*	5.75	67997-408†	.36	67997-526§	2.08
67997-172*	7.80	67997-414†	.62	67997-532§	2.56
67997-202†	.19	67997-416†	.71	67997-540§	3.21
67997-204†	.38	67997-420†	.89	67997-550§	3.95
67997-206†	.57	67997-426†	1.15	67997-572§	5.29
67997-208†	.76	67997-432‡	1.42	67997-672#	5.94
67997-214†	1.32				

RIGHT-ANGLE 1-ROW BERGSTIK® II HEADERS

68016 SERIES

Pin Length: Below plastic (G) 3.05mm (0.120 in.)
Above plastic (H) 5.84mm (0.230 in.)
Bend distance from plastic (H) 1.52mm (0.060 in.)

Mfr. No.	Price Each	Mfr. No.	Price Each	Mfr. No.	Price Each
68016-136*	\$3.49	68016-436‡	\$1.49	68016-636#	\$3.00
68016-236†	3.29	68016-536§	2.68		

*0.76µm (30µin.) gold over 1.27 µm (50µin.) nickel
†0.38µm (15µin.) gold over 1.27 µm (50 µin.) nickel
‡3.81µm (150µin.) tin-lead
§0.38µm (15 µin.) GXT™ over 1.27µm (50µin.) nickel
#0.76µm (30µin.) GXT™ over 1.27µm (50µin.) nickel.

**PRICES SHOWN ARE FOR REFERENCE ONLY. PLEASE CALL
US FOR CURRENT QUOTES.**



50-6A-20



50-12A-30



50-12B-10



50-30C-30



50-72C-10

Printed circuit connectors designed for minimum printed circuit card wear, low insertion force and positive contact with $\frac{1}{16}$ " printed circuit boards. All units utilize bifurcated contacts permitting two flexing surfaces instead of one for positive contact. Bifurcated contacts are especially recommended for added contact reliability where vibration or printed circuit board irregularities would otherwise cause trouble. Types meeting MIL spec MIL-C-21097 are also available as indicated. **Mounting:** Available with 0.128"

dia. holes for standard mounting, molded-in bushings or floating bushings. **Insulator Material:** Glass-filled polyester; UL94V-0 rated. **Contacts:** Spring brass with gold over nickel plating. **Polarizing Key:** No. 50-PK3 glass epoxy for between contacts. No. 50-PK4 glass-filled thermoplastic for in-contact. **Voltage Rating:** 1800 VAC rms at sea level. **Current:** Rated 5 amps. **Contact Resistance:** 6 Milliohms max. **Insulation Resistance:** 5000 megohms. **Temperature Range:** -65°C to +105°C. Sold 1 per package.

COMMERCIAL TYPES

SINGLE READOUT WITH .128" MTG. HOLES

Solder eyelet termination.

Part Number	Contact Pos.	Price Each	Part Number	Contact Pos.	Price Each
50-6A-20-P	6	\$1.98	50-6B-10-P	6	\$1.98
50-10A-20-P	10	2.20	50-10B-10-P	10	2.18
50-12A-20-P	12	2.65	50-15B-10-P	15	3.22
50-15A-20-P	15	3.22	50-20B-10-P	20	2.03
50-18A-20-P	18	4.23	50-22B-10-P	22	4.63
50-22A-20-P	22	4.72	50-25B-10-P	25	5.51
50-25A-20-P	25	5.51	.....	.....	.....

$\frac{1}{2}$ " DIP solder termination.

Part Number	Contact Pos.	Price Each	Part Number	Contact Pos.	Price Each
50-6S-10-P	6	\$2.48	50-18S-10-P	18	\$5.30
50-10S-10-P	10	3.37	50-22S-10-P	22	6.28
50-12S-10-P	12	3.81	.....	.....	.....
50-15S-10-P	15	4.62	.....	.....	.....

PRECISION DOUBLE READOUT EDGE CONNECTORS WITH .100" CONTACT CTRS., $\frac{1}{16}$ " BOARDS

Unique bifurcated cantilever contact construction provides simple, dependable design capable of handling .062" thick double sided PC boards. Contacts pre-loaded against an insulator stop to provide gap uniformly and assure rapid build-up of force to the PC board. Contacts are alloy 688 high-tensile brass with gold over nickel plating. **Insulation:** Glass fiber-filled diallyl phthalate per MIL-M-14, type SDG-F. **Insulation:** Glass fiber-filled diallyl phthalate. Type SDG-F per MIL-M-14. **Polarizing Key:** No. 50-PK-3, ordered separately. **Card Guide:** No 50-GP-1, Must also be ordered separately. To order dip solder tails, change -10 to -20. Sold 1 per package.

Solder termination.

Part Number	Contact Positions	Price Each	Part. Number	Contact Positions	Price Each
WITH CONVENTIONAL CONTACT NUMBERING					
50-30C-10-P	15	\$ 6.18	50-80C-10-P	40	\$11.24
50-44C-10-P	22	7.59	50-86C-10-P	43	12.34
50-72C-10-P	36	10.60	.....	.....	.....

WITH REVERSED CONTACT NUMBERING

.025" sq. Wire Wrap termination.					
50-30C-10-1-P	15	\$ 6.18	50-30C-30-1-P	15	\$ 6.91
50-44C-10-1-P	22	7.59	50-44C-30-1-P	22	8.43
.....	.....	.....	50-72C-30-1-P	36	11.57
.....	.....	.....	50-80C-30-1-P	40	12.34
.....	.....	.....	50-86C-30-1-P	43	13.11

DIP SOLDER (Without Mounting Ears)

.025" sq. Wire Wrap termination.					
50-30C-30-P	15	\$ 6.91	50-86C-30-P	43	\$13.25
50-44C-30-P	22	8.43	.....	.....	.....

CARD GUIDE FOR .100" AND .156" TYPES

Part Number	Price Each*	Part Number	Price Each*
50-GP-1-P	\$3.85	50-PK2M-P	\$4.25
50-PK-1-P	4.25	50-PK-3-P	4.25
50-PK-2-P	4.25	50-PK-4-P	4.75

* 50-GP-1-P sold 5 per package. All others sold 25 per package.

DOUBLE READOUT, .200" ROW SPACING, .128" MTG. HOLES

Conventional solder eyelet termination.

Part Number	Contact Pos.	Price Each	Part Number	Contact Pos.	Price Each
50-12A-30-P	6	\$1.42	50-12B-10-P	6	\$1.41
50-20A-30-P	10	1.82	50-20B-10-P	10	2.03
50-24A-30-P	12	2.03	50-24B-10-P	12	2.51
50-30A-30-P	15	2.32	50-30B-10-P	15	2.89
50-36A-30-P	18	3.10	50-36B-10-P	18	3.26
50-44A-30-P	22	3.57	50-44B-10-P	22	3.45
50-50A-30-P	25	3.92	50-50B-10-P	25	3.80

$\frac{1}{2}$ " DIP solder termination.

Part Number	Contact Pos.	Price Each	Part Number	Contact Pos.	Price Each
50-20S-20-P	10	\$3.31	50-44S-20-P	22	\$6.28
50-30S-20-P	15	4.53	.....	.....	.....

.156" CONTACT CENTERS CARDCON P.C. SINGLE AND DOUBLE READOUT EDGE CONNECTORS FOR $\frac{1}{16}$ " BOARDS

Ideal for applications involving vibration or board irregularities. Bifurcated, semi-bellows contacts provide added contact reliability. **Voltage Rating:** 1800 VAC rms at sea level. **Current Rating:** 5 amps. **Contact Resistance:** 0.006 ohms max. **Insulation Resistance:** 5000 megohms. **Insulator:** Glass-filled polyester with UL94V-0 rating. **Contact Material:** Spring brass; plating of gold over nickel in contact area and tin on tails. **Polarizing key:** No. 50-PK-3 between contacts or 50-PK-4 in-contact ordered separately. **Mounting:** Ears with hole for 4-40 screw or no mounting ears. Sold 1 per package.

Part No. Mounting Hole	Price Each	Part No. Without Ears	Price Each
SOLDER EYELET—.200" BETWEEN ROWS—BL READOUT			
.....	.....	50-12SN-10-P	\$3.12*
.....	.....	50-44SN-10-P	3.63
.....	.....	50-48SN-10-P	3.63
.200" BETWEEN ROWS—.156" LONG TAIL—DBL READOUT			
50-12SN-1-P	\$2.26*	50-12SN-3-P	\$3.12*
50-24SN-1-P	2.00	50-20SN-3-P	2.24
50-30SN-1-P	2.31	50-24SN-3-P	2.50
50-36SN-1-P	2.61	50-44SN-3-P	3.63
50-44SN-1-P	2.76	50-50SN-3-P	4.18
50-50SN-1-P	3.03	.....	.....

*Sold 2 per package.

WIRE WRAP TERMINAL SERIES .156" ON CENTERS

Single-level Wire Wrap tails .031" x .062". Sold 1 per package.

Part Number	Contact Positions	Price Each
50-20E-10-1-P	10/20	\$ 6.24
50-30E-10-1-P	15/30	7.32
50-36E-10-1-P	18/36	8.38
50-60E-10-1-P	30/60	12.44

Also available in 2 and 3 levels. To order, change E to F for 2-level or to G for 3-level.

**NEED VALUE-ADDED SERVICES?
CALL US FOR INFORMATION.**

Barrier design for high voltage rating. Molded phenolic base, nickel plated brass eyelets, steel screws with nickel over copper flash, and brass over tin terminals. Marker strips and fanning strips for terminal blocks are listed on other pages. Terminals available: $\frac{3}{4}$ W for soldered wires on one side of block, Y for soldered wires underneath block; W for soldered wires on both sides of block.



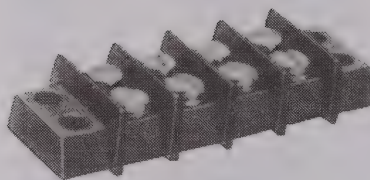
	Type 140-P	Type 141-P	Type 142-P	Type 150*-P	Type 151*-P	Type 152*-P
Size, W x H	$\frac{7}{8}'' \times \frac{13}{32}''$	$1\frac{1}{8}'' \times \frac{1}{2}''$	$1\frac{1}{8}'' \times \frac{5}{8}''$	$1\frac{3}{16}'' \times \frac{3}{4}''$	$2'' \times \frac{13}{16}''$	$2\frac{1}{2}'' \times 1\frac{1}{8}''$
Barrier spacing	$\frac{3}{16}''$	$\frac{7}{16}''$	$\frac{9}{16}''$	$\frac{13}{16}''$	$\frac{7}{8}''$	$1\frac{1}{4}''$
Mtg. centers	$\frac{9}{16}''$	$\frac{27}{64}''$	$\frac{1}{2}''$	$\frac{5}{8}''$	$\frac{180}{1000}''$	$\frac{7}{8}''$
Mtg. hole dia.	.160"	.175"/.185"	.209"	.160"	.180"	.209"
Screw size	5-40	6-32	8-32	10-32	12-32	$\frac{1}{4}''$ -28
Max. wire size	#16	#14	#10	#10	#8	#6
Max. V rms†	1100	1100	1600	1500	1800	2100

* Have .136" hole centered between mounting holes. † Without marker strip.

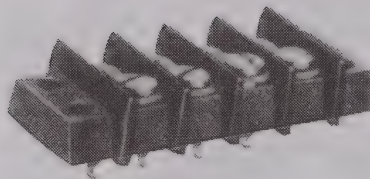
SERIES 140 (UL RECOGNIZED)

Con- tacts	Type 140-P			Type 140- $\frac{3}{4}$ W-P			Type 140 Y-P		
	Part No.	Std. Pkg. Qty.	Price Each	Part No.	Std. Pkg. Qty.	Price Each	Part No.	Std. Pkg. Qty.	Price Each
1	1-140-P	2	\$2.56	1-140- $\frac{3}{4}$ W-P	2	\$3.26	1-140-Y-P	2	\$2.62
2	2-140-P	5	3.95	.....	.....	.....	2-140-Y-P	5	4.85
3	3-140-P	5	4.65	3-140- $\frac{3}{4}$ W-P	2	2.88	3-140-Y-P	5	5.90
4	4-140-P	5	5.05	4-140- $\frac{3}{4}$ W-P	2	3.76	4-140-Y-P	2	3.00
5	5-140-P	5	5.80	.....	.....	.....	5-140-Y-P	2	3.58
6	6-140-P	2	2.92	6-140- $\frac{3}{4}$ W-P	1	2.69	6-140-Y-P	1	2.08
7	7-140-P	2	3.14	7-140- $\frac{3}{4}$ W-P	1	3.19	7-140-Y-P	1	2.34
8	8-140-P	2	3.60	8-140- $\frac{3}{4}$ W-P	1	3.42	8-140-Y-P	1	2.62
9	9-140-P	2	2.12	.....	.....	.....	9-140-Y-P	1	2.89
10	10-140-P	2	4.58	10-140- $\frac{3}{4}$ W-P	1	4.20	10-140-Y-P	1	3.14
11	11-140-P	1	2.59	.....	.....	.....	11-140-Y-P	1	4.14
12	12-140-P	1	2.62	12-140- $\frac{3}{4}$ W-P	1	4.98	12-140-Y-P	1	4.25
13	13-140-P	1	3.00	.....	.....	.....	.....	.....	.....
14	14-140-P	1	3.16	14-140- $\frac{3}{4}$ W-P	1	6.24	14-140-Y-P	1	4.72
15	15-140-P	1	3.22	15-140- $\frac{3}{4}$ W-P	1	6.23	15-140-Y-P	1	4.67
16	16-140-P	1	3.45	16-140- $\frac{3}{4}$ W-P	1	6.61	16-140-Y-P	1	4.91
17	17-140-P	1	3.68	17-140- $\frac{3}{4}$ W-P	1	7.45	17-140-Y-P	1	5.57
18	18-140-P	1	3.90	18-140- $\frac{3}{4}$ W-P	1	7.80	18-140-Y-P	1	5.81
19	19-140-P	1	4.12	.....	.....	.....	19-140-Y-P	1	6.10
20	20-140-P	1	4.23	20-140- $\frac{3}{4}$ W-P	1	8.13	20-140-Y-P	1	6.11

Quantity discount upon request. Series 140 terminal blocks are available with up to 25 positions.



Series 140

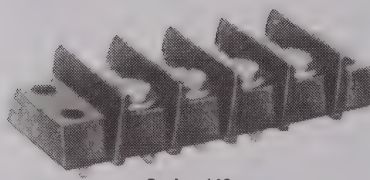


Series 141

SERIES 141 (UL RECOGNIZED)

Con- tacts	Type 141-P			Type 141- $\frac{3}{4}$ W-P			Type 141-Y-P		
	Part No.	Std. Pkg. Qty.	Price Each	Part No.	Std. Pkg. Qty.	Price Each	Part No.	Std. Pkg. Qty.	Price Each
1	.....	.....	.....	1-141- $\frac{3}{4}$ W-P	2	\$2.60	.....	.....	.....
2	2-141-P	5	\$3.95	2-141- $\frac{3}{4}$ W-P	2	2.88	2-141-Y-P	5	\$6.00
3	3-141-P	5	6.90	3-141- $\frac{3}{4}$ W-P	2	3.92	3-141-Y-P	2	3.42
4	4-141-P	5	6.90	4-141- $\frac{3}{4}$ W-P	1	2.15	4-141-Y-P	2	3.44
5	5-141-P	2	3.14	.....	.....	.....	5-141-Y-P	1	2.25
6	6-141-P	2	3.60	.....	.....	.....	6-141-Y-P	1	2.47
7	7-141-P	1	2.21	.....	.....	.....	.....	.....	.....
8	8-141-P	1	2.32	8-141- $\frac{3}{4}$ W-P	1	3.97	8-141-Y-P	1	3.26
9	9-141-P	1	2.62	.....	.....	.....	9-141-Y-P	1	3.79
10	10-141-P	1	2.73	10-141- $\frac{3}{4}$ W-P	1	4.93	10-141-Y-P	1	4.12
11	11-141-P	1	3.00	11-141- $\frac{3}{4}$ W-P	1	5.83	11-141-Y-P	1	4.42
12	12-141-P	1	3.26	12-141- $\frac{3}{4}$ W-P	1	5.85	12-141-Y-P	1	4.79
13	13-141-P	1	3.63	.....	.....	.....	.....	.....	.....
14	14-141-P	1	3.90	14-141- $\frac{3}{4}$ W-P	1	6.73	14-141-Y-P	1	5.66
15	15-141-P	1	4.20	.....	.....	.....	15-141-Y-P	1	6.04

Quantity discount upon request. Series 141 terminal blocks are available with up to 20 positions.



Series 142

SERIES 142 (UL RECOGNIZED)

Con- tacts	Type 142-P			Type 142- $\frac{3}{4}$ W-P			Type 142-Y-P		
	Part No.	Std. Pkg. Qty.	Price Each	Part No.	Std. Pkg. Qty.	Price Each	Part No.	Std. Pkg. Qty.	Price Each
2	2-142-P	2	\$2.56	.....	.....	.....	2-142-Y-P	2	\$3.06
3	3-142-P	2	3.08	3-142- $\frac{3}{4}$ W-P	2	\$4.86	3-142-Y-P	2	3.74
4	4-142-P	2	3.54	.....	.....	.....	4-142-Y-P	1	2.47
5	5-142-P	1	2.57	.....	.....	.....	5-142-Y-P	1	2.89
6	6-142-P	1	3.68	.....	.....	.....	6-142-Y-P	1	3.95
7	7-142-P	1	4.02	.....	.....	.....	.....	.....	.....
8	8-142-P	1	4.20	.....	.....	.....	8-142-Y-P	1	4.57
9	9-142-P	1	6.42	.....	.....	.....	9-142-Y-P	1	5.42
10	10-142-P	1	6.75	.....	.....	.....	10-142-Y-P	1	5.51
11	11-142-P	1	7.05	.....	.....	.....	.....	.....	.....
12	12-142-P	1	7.09	12-142- $\frac{3}{4}$ W-P	1	8.71	.....	.....	.....
13	13-142-P	1	7.78	.....	.....	.....	.....	.....	.....
14	14-142-P	1	8.34	.....	.....	.....	.....	.....	.....
15	15-142-P	1	8.38	.....	.....	.....	.....	.....	.....
16	16-142-P	1	8.94	.....	.....	.....	.....	.....	.....
17	17-142-P	1	9.07	.....	.....	.....	.....	.....	.....

Quantity discount upon request.

NYLON CABLE HOUSINGS

Highly reliable, versatile connectors rated 250 volts per circuit. Nylon housings are available in miniature size for .062" pin terminals, or standard size for .093" pin terminals (supplied less terminals.) Ideal for use in business machines, appliances, communications, instrumentation, and other demanding applications. Available with integrally molded ears for easy panel mounting. All type (except single circuit) are polarized. Both male and female pin terminals of the same mating diameters can be extracted and easily replaced using ejector tools. Housings are UL recognized.

MINIATURE NYLON PLUG HOUSINGS

Accept .062" pin terminals, listed at right.

Waldom/ Molex No.	Fig.	No. of Cir- cuits	Amps per Circ.	Std. Pkg.	
				Qty.	Price/ Pkg.
03-06-2011	A	1	5	10	\$ 1.60
03-06-2031	B	3	5*	10	3.11
03-06-2032	B	3	5	10	3.11
03-06-2041	B	4	5*	10	4.60
03-06-2042	B	4	5	10	4.60
03-06-2054	B	5	5*	5	2.46
03-06-2055	B	5	5	5	2.46
03-06-2061	C	6	5	5	2.14
03-06-2062	C	6	5*	5	2.14
03-06-2091	C	9	5*	5	2.21
03-06-2092	C	9	5	5	2.21
03-06-2121	C	12	5*	5	2.57
03-06-2122	C	12	5	5	2.57
03-06-2151	C	15	5*	5	3.58
03-06-2152	C	15	5	5	3.69
03-06-2241	C	24	4*	5	8.94
03-06-2242	C	24	4	5	8.94
03-06-2361	C	36	4*	5	11.39
03-06-2362	C	36	4	5	11.39

STANDARD NYLON PLUG HOUSINGS

Accept .093" terminals, listed at right.

03-09-2011	A	1	12	10	\$1.70
03-09-2021	B	2	12*	10	3.23
03-09-2022	B	2	12	10	3.11
03-09-2031	B	3	12*	10	3.94
03-09-2032	B	3	12	10	3.72
03-09-2041	B	4	9*	10	3.86
03-09-2052	B	5	9	5	2.66
03-09-2061	C	6	9*	5	2.96
03-09-2062	C	6	9	5	2.31
03-09-2091	C	9	9*	5	3.11
03-09-2092	C	9	9	5	2.83
03-09-2121	C	12	7.5	5	3.38
03-09-2122	C	12	7.5*	5	3.38
03-09-2152	C	15	7.5*	5	4.21

*With integrally molded mounting ears.

STANDARD NYLON RECEPTACLE HOUSINGS

Accept .093" terminals. With holding tabs and mounting ears.

03-09-1011	A	1	12†	10	\$1.33
03-09-1021	B	2	12	10	2.85
03-09-1022	B	2	12	10	3.08
03-09-1031	B	3	12	10	4.49
03-09-1032	B	3	12	10	4.36
03-09-1041	B	4	9	10	4.02
03-09-1052	B	5	9†	5	3.03
03-09-1061	C	6	9	5	2.48
03-09-1091	C	9	9	5	2.98
03-09-1121	C	12	7.5	5	3.26
03-09-1151	C	15	7.5	5	4.63

†Holding tabs only. ‡Without mounting ears or holding tabs.

CABLE CONNECTOR DESIGNER KITS



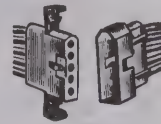
Ideal for the creative designer, repairman and experimenter. Eliminates need for searching for proper connectors or tools; everything under one lid, covering all circuit capacities with male and female housings, terminals and crimping tool. **Lightweight, unbreakable case** has snap-lock to avoid spills and mix-ups.

Waldom No. WM-50 Designer Kit— Same as WM-72, but parts cover from single circuit to 15-circuit designs (250 V and up to 12 amps per circuit); and, totals 45 complete connectors only. All have pin terminal size .093" dia. With crimping tool, pin terminal ejector tool and case.
Price Each **\$42.95**

Waldom No. WM-72 Designer Kit—Contains all parts to needed assemble male and female connectors from single circuit to 36-circuit designs (250 V and up to 5 amps per circuit); totals 56 connectors. All have pin terminal size .062" dia. With crimping tool, pin terminal ejector tool and case.
Price Each **\$42.95**



A



B



C

MINIATURE NYLON RECEPTACLE HOUSINGS

Accept .062" terminals. With holding tabs and mounting ears.

Waldom/ Molex No.	Fig.	No. of Cir- cuits	Amps per Circ.	Std. Pkg.	
				Qty.	Price/ Pkg.
03-06-1011	A	1	5†	10	\$ 1.44
03-06-1031	B	3	5	10	3.28
03-06-1032	B	3	5†	10	3.28
03-06-1041	B	4	5	10	4.85
03-06-1055	B	5	5	5	3.12
03-06-1061	C	6	5	5	2.29
03-06-1091	C	9	5	5	2.49
03-06-1092	C	9	5†	5	2.49
03-06-1121	C	12	5	5	2.90
03-06-1122	C	12	5†	5	2.90
03-06-1151	C	15	5	5	4.37
03-06-1152	C	15	5†	5	4.37
03-06-1241	C	24	5	5	8.94
03-06-1242	C	24	5†	5	8.94
03-06-1361	C	36	4	5	16.57

†Holding tabs only.

HOUSING DIMENSIONS

MINIATURE HOUSINGS FOR .062" TERMINALS

Plugs are .750" deep; receptacles, .781" deep.

Waldom/ Molex No. 03-06-	Plug Dimensions			Receptacle Dimensions		
	Overall (In.)		Mounting Hole (In.)	Overall (In.)		Mounting Hole (In.)
	W	H		W	H	
2011, 1011	.296 dia.			.203 dia.		
2031, 1031	.281	.578	.318 × .754	.203	.484	.265 × .650
2041, 1041	.296	.734		.203	.625	
2054, 1055	.296	.875		.203	.781	.265 × .940
2062, 1061	.578	.453		.484	.343	.552 × .505
2091, 1091	.578	.578	.615 × .752	.531	.484	.552 × .650
2121, 1121	.578	.718	.614 × .903	.531	.625	.563 × .795
2151, 1151	.593	.859	.614 × 1.042	.531	.765	.563 × .934
2241, 1241	.750	.930	.765 × 1.182	.750	.920	.715 × 1.0719
2361, 1361	.812	1.640	.825 × 1.795	.859	1.515	.707 × 1.677

STANDARD HOUSINGS FOR .093" TERMINALS

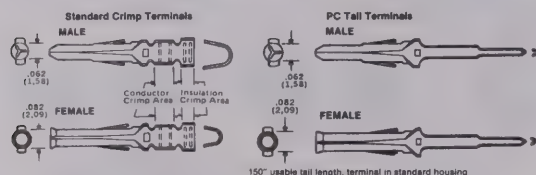
Plugs are .968" deep; receptacles, 1.000" deep except 03-09-1031, 03-09-10611 thru 03-09-1151, 1.031" deep.

Waldom/ Molex No. 03-09-	Plug Dimensions			Receptacle Dimensions		
	Overall (In.)		Mounting Hole (In.)	Overall (In.)		Mounting Hole (In.)
	W	H		W	H	
2011, 1011	.358 dia.			.234 dia.		
2021, 1021	.352	.640	.800 × .375	.250	.531	.705 × .312
2031, 1031	.338	.773	.933 × .375	.234	.671	.840 × .312
2041, 1041	.338	.968	1.131 × .375	.236	.875	1.038 × .312
2052, 1052	.343	1.171		.234	1.062	
2061, 1061	.640	.531	.750 × .695	.632	.437	.718 × .600
2091, 1091	.734	.756	.937 × .725	.625	.671	.828 × .725
2121, 1121	.734	.975	1.155 × .760	.640	.870	1.050 × .655
1151	.734	1.169	1.343 × .760	.632	1.067	1.240 × .655

PIN TERMINALS FOR NYLON HOUSINGS

Spring tempered tin-plated brass, .093" dia., types fit standard housings: Std. pkg., 100. Style C in table below is for crimp, PC is for printed circuit.

Waldom/Molex No.		Style	For Wire Size	Price per 100
Male	Female			
02-09-2103, 02-09-1103		C	14-18	\$10.38
02-09-2118, 02-09-1118		C	18-24	10.38
02-09-2143, 02-09-1143		C	22-30	10.38
02-09-2134C, 02-09-1134C		PC	.....	15.93
02-06-2103, 02-06-1103		C	18-22	9.72

waldom**molex****.062" DIAMETER TERMINALS****ELECTRICAL SPECIFICATIONS:**

Resistance: MV voltage drop per amp on mated terminal, $\pm 10\%$; - 1st engagement 3.2 -10th engagement 3.4.

High Voltage Test: Withstands 1500 volts RMS for 60 seconds min. applied between adjacent terminals.

Temperature Rise/Operating Range: 30°C maximum for all connectors at maximum rated current.

Current Rating: Amperage rating 5 amps. (4 amps on some sizes.)

Storage Temperature Range: -40°C to 125°C

CHAIN FORM MALE

Part No.	Male/Female Series	Insulation Dia.(ins.)	Std. Pkg.	
			Qty.	Price /Pkg.
02-06-2101	1560/1561	.060/.120	7000	\$ 30.00
02-06-2131	1854/1855	.040/.090	20000	25.00

CHAIN FORM FEMALE

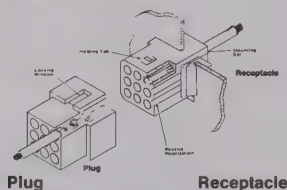
02-06-1101	1560/1561	.060/.120	7000	\$ 30.00
02-06-1131	1854/1855	.040/.090	20000	25.00
02-06-1104	—/4529	.060/.120	7000	37.00
02-06-1109	—/4559	.040/.090	7000	37.00

LOOSE FORM MALE

02-06-2103	1560/1561	.060/.120	100	\$ 9.70
02-06-2132	1854/1855	.040/.090	100	9.70
02-06-6103	1560/1561	.060/.120	100	162.20
02-06-6135	1854/1855	.040/.090	100	162.50
02-06-8103	1778/1779	—	100	15.70

LOOSE FORM FEMALE

02-06-1103	1560/1561	.060/.120	100	\$ 9.70
02-06-1132	1854/1855	.040/.090	100	9.70
02-06-5103	1560/1561	.060/.120	100	158.70
02-06-5135	1854/1855	.040/.090	100	162.20
02-06-1105	—/4529	.060/.120	100	11.80
02-06-1110	—/4559	.040/.090	100	11.90
02-06-1202	1786/1787	.060/.120	100	15.80
02-06-7103	1778/1779	—	100	15.70

.093" DIAMETER CONNECTOR HOUSINGS**3191 Series**

- Integrally molded polarization
- 94V-2 and 94V-0 nylon
- Accepts Molex .093" (2.36mm) crimp type or P.C. tail terminals **Order separately.**
- UL, CSA, VDE & EAMCL approved
- 1, 2, 3, 4, 6, 9, 12, 15 circuit versions
- Positive locking
- Integrally molded mounting ears available on plug only
- .16" (4mm) over surface and .12" (3mm) through air spacing between terminals
- Standard color white. Can be color coded in black, brown, green, gray, orange, amber, red or yellow
- .264" (6.71mm) grid pattern
- Plug accommodates 3191-K polarizing key

Plug accommodates 94V-2 polarizing key					
Part No.	Circuits	Max. Amps	Max. Volts	Std. Pkg.	
				Qty.	Price /Pkg.
PLUG WITH EARS (94V-2)					
19-09-2028	2	12	600	10	\$4.54
19-09-2038	3	11	600	10	4.98
19-09-2048	4	9	600	10	5.05
19-09-2068	6	9	600	10	5.89
19-09-2098	9	8	600	10	6.44

.093" DIAMETER CONNECTOR HOUSINGS (CONT'D)

Part No.	Circuits	Max. Amps	Max. Volts	Std. Pkg.	
				Qty.	Price /Pkg.
PLUG WITHOUT EARS (94V-2)					
19-09-2019	1	12	600	10	\$ 2.36
19-09-2029	2	12	600	10	4.54
19-09-2039	3	11	600	10	5.08
19-09-2049	4	9	600	10	5.05
19-09-2069	6	9	600	10	5.89
19-09-2099	9	8	600	10	6.44
19-09-2129	12	7	600	10	7.30
19-09-2159	15	6	600	10	10.72

PLUG WITHOUT EARS (94V-2)

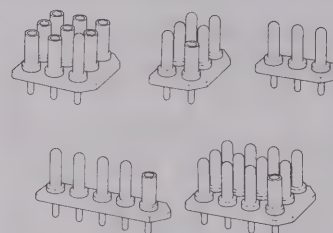
19-09-2046	4	9	600	10	\$ 9.16
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RECEPTACLE WITHOUT EARS (94V-2)

19-09-1029	2	12	600	10	\$ 4.38
19-09-1039	3	11	600	10	4.75
19-09-1049	4	9	600	10	5.10
19-09-1069	6	4	600	10	6.18
19-09-1099	9	8	600	10	7.02
19-09-1129	12	7	600	10	8.11
19-09-1159	15	6	600	10	12.02

RECEPTACLE WITHOUT EARS (94V-2)

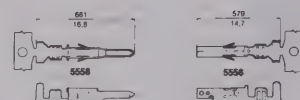
19-09-1036	3	11	600	10	\$ 8.40
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PIN AND SOCKET WAFERS

These pre-assembled wafers help save time and labor in production testing and servicing. The assembly is ready to be placed on the printed circuit boards and soldered. An intermix of male and female terminals assures error-free connections and positive polarity.

Part No.	Circuits	Max. Amps*	Max. Volts	Std. Pkg.	
				Qty.	Price /Pkg.
09-18-5031	3	5	250	10	\$11.08
09-18-5051	5	5	250	10	15.66
09-18-5061	6	5	250	10	16.74
09-18-5091	9	5	250	10	27.80
09-18-5094	9	5	250	10	27.25
09-18-5121	12	5	250	10	34.01
09-18-5127	12	5	250	10	34.70

*Current rating varies.

5556/5558 SERIES TERMINALS

Part No.		Form	AWG Wire Size	Std. Pkg.	
5558 Male	5556 Female			Qty.	Price /Pkg.
39-00-0040	39-00-0038	Chain	18-24	4000	\$ 57.00
39-00-0041	39-00-0039	Loose	18-24	100	13.90
39-00-0048	39-00-0046	Chain	22-28	6000	51.00
39-00-0049	39-00-0047	Loose	22-28	100	13.90
39-00-0061	39-00-0059	Chain	18-24	4000	110.00
39-00-0062	39-00-0060	Loose	18-24	100	26.40

BARREL STYLE TERMINALS

KRIMPTITE®

This is the basic non-insulated, one-piece barrel style.

Molex No.	Waldom No.	Stud Size	Max. Length	Price Each Pkg., 100
26-24 WIRE RANGE				
M-1122-02	S-1926	2	.366	\$2.80
M-1114-02	M-1122-04	2	.460	2.80
M-1113-04	M-1133-04	4	.492	2.80
M-1118-06	M-1188-06	6	.590	2.80
M-1118-08	M-1188-08	8	.590	2.80
M-1118-10	M-1188-10	10	.590	2.80

22-18 WIRE RANGE				
AA-120-04	SS-1047	3-4	.484	\$2.80
AA-132-06	SS-1700	5-6	.582	2.80
AA-121-06	SS-1002	5-6	.641	2.80
AA-132-08	SS-1097	8	.582	2.80
AA-121-08	.....	8	.641	2.80
AA-133-10	SS-1098	10	.591	2.80
AA-121-10	SS-1003	10	.641	2.80
AA-122-14	SS-1004	1/4	.835	3.80
AA-122-56	SS-1005	5/16	.835	3.80
AA-126-38	SS-1143	3/8	1.034	3.80

16-14 WIRE RANGE				
BB-123-04	SS-1048	3-4	.560	\$2.80
BB-123-06	SS-1006	5-6	.560	2.80
BB-137-06	SS-1092	5-6	.645	2.80
BB-123-08	.....	8	.560	2.80
BB-137-08	SS-1024	8	.645	2.80
BB-139-08	SS-1093	8	.696	2.80
BB-137-10	SS-1008	10	.645	2.80
BB-139-10	SS-1094	10	.696	2.80
BB-125-10	SS-1009	1/4	.837	3.80

12-10 WIRE RANGE				
C-136-06	S-1149	5-6	.741	\$4.30
C-128-06	S-1049	5-6	.785	4.30
C-136-08	S-1150	8	.741	4.30
C-128-08	S-1050	8	.785	4.30
C-128-10	S-1011	10	.785	4.30
C-130-10	.....	10	.952	5.70
C-130-14	S-1100	1/4	.952	5.70
C-140-14	.....	1/4	1.056	5.70
C-130-56	S-1101	5/16	.952	5.70
C-101-12	S-1155	1/2	1.280	7.10

AVIKRIMP®

A color-coded barrel style, featuring a tin-plated brass sleeve. The permanent nylon insulating sleeve extends beyond the metal support sleeve.

Molex No.	Waldom No.	Stud Size	Max. Length	Price Each Pkg., 100
26-24 WIRE RANGE				
M-8122-02	N-5926	2	.512	\$ 9.00
M-8114-02	.....	2	.615	9.90
M-8113-04	N-5929	4	.645	9.00
M-8113-06	N-5930	6	.645	9.00
M-8118-06	N-5951	6	.736	9.00
M-8118-08	N-5932	8	.736	9.00

22-18 WIRE RANGE				
AA-832-06	SN-5700	5-6	.807	\$ 9.00
AA-821-06	SN-5002	5-6	.866	9.00
AA-832-08	SN-5097	8	.807	9.00
AA-821-08	SN-5701	8	.866	9.00
AA-832-10	SN-5098	10	.816	9.00
AA-821-10	SN-5003	10	.866	9.00
AA-822-14	SN-5004	1/4	1.060	11.60
AA-822-56	SN-5005	5/16	1.060	11.60
AA-826-38	SN-5143	3/8	1.259	11.60

16-14 WIRE RANGE				
BB-823-04	SN-5048	3-4	.770	\$ 9.00
BB-823-06	SN-5006	5-6	.770	9.00
BB-837-06	SN-5092	5-6	.890	9.00
BB-823-08	.....	8	.770	9.00
BB-837-08	SN-5024	8	.890	9.00
BB-839-08	SN-5093	8	.940	9.00
BB-837-10	SN-5008	10	.890	9.00
BB-839-10	SN-5094	10	.940	9.00
BB-825-10	SN-5009	1/4	1.080	11.60

Part No.	Stud Size	Max. Length	Price Each Pkg., 100
12-10 WIRE RANGE			
C-836-06	5-6	1.047	\$11.50
C-836-08	8	1.047	11.50
C-828-10	10	1.091	11.80
C-830-14	1/4	1.258	12.20
C-830-56	5/16	1.258	12.20
C-840-56	5/16	1.362	12.80
C-801-12	1/2	1.536	15.20

INSULKRIMP®

Features an insulation sleeve of color-coded PVC permanently attached to the KRIMPTITE barrel or the brazed seam Versa Krimp. The insulation protects against vibration damage.

Molex No.	Waldom No.	Stud Size	Max. Length	Price Each Pkg., 100
22-18 WIRE RANGE				
AA-220-04X	ST-2047	3-4	.709	\$ 5.70
AA-232-06X	ST-2700	5-6	.807	5.70
AA-232-08X	ST-2097	8	.807	5.70
AA-221-08X	ST-2701	8	.866	5.70
AA-233-10X	ST-2098	10	.816	5.70
AA-222-14X	ST-2004	1/4	1.060	8.10
AA-222-56X	ST-2005	5/16	1.060	8.10
AA-226-38X	ST-2143	3/8	1.259	8.10

16-14 WIRE RANGE				
BB-223-04X	ST-2048	3-4	.800	\$ 5.70
BB-223-06X	ST-2006	5-6	.800	5.70
BB-237-06X	ST-2092	5-6	.890	5.70
BB-223-08X	.....	8	.800	5.70
BB-239-08X	ST-2093	8	.940	5.70
BB-237-10X	ST-2008	10	.890	5.70
BB-239-10X	.....	10	.940	5.70
BB-225-14X	ST-2009	1/4	1.080	8.20

12-10 WIRE RANGE				
C-236-06X	T-2149	5-6	1.032	\$ 7.70
C-228-06X	T-2049	5-6	1.076	7.70
C-236-08X	T-2150	8	1.032	7.70
C-228-08X	T-2050	8	1.076	7.70
C-228-10X	T-2011	10	1.076	7.70
C-230-14X	T-2100	1/4	1.243	8.70
C-240-14X	.....	1/4	1.347	9.10
C-230-56X	T-2101	5/16	1.243	8.70
C-240-56X	.....	5/16	1.347	8.20
C-201-12X	T-2155	1/2	1.571	16.10

VERSAKRIMP®

The Versakrimp is for hard to crimp and standard wires. When the butted-seam Krimptite barrel is bonded with a brazing alloy, it becomes a Versakrimp.

Molex No.	Waldom No.	Stud Size	Max. Length	Price Each Pkg., 100
22-18 WIRE RANGE				
AA-320-04	SB-3047	3-4	.484	\$4.90
AA-332-06	SB-3700	5-6	.582	4.90
AA-322-14	SB-3004	1/4	.835	7.30
AA-322-56	SB-3005	5/16	.835	7.30
AA-326-38	SB-3143	3/8	1.034	7.30

16-14 WIRE RANGE				
BB-339-08	SB-3093	8	.696	\$4.90
BB-325-14	SB-3009	1/4	.837	7.30

12-10 WIRE RANGE				
C-336-06	B-3149	5-6	.741	\$6.60
C-328-10	B-3011	10	.785	6.60
C-330-14	B-3100	1/4	.952	8.10
C-340-38	B-3013	3/8	1.056	8.10

RING TONGUE TERMINALS



8 Wire Range



6 Wire Range



4 Wire Range



2 Wire Range



1/0 Wire Range



2/0 Wire Range



3/0 Wire Range



4/0 Wire Range

8 WIRE RANGE

Molex No.	Waldom No.	Stud Size	W.	C.	Price Each Pkg./5
VERSAKRIMP™					
.....	D-350-06	6	.468	.388	\$1.08
D-350-10	B-3202	10	.468	.388	1.08
D-351-10	B-3205	10	.583	.453	1.08
D-350-14	B-3203	1/4	.468	.388	1.12
D-351-14	B-3206	1/4	.583	.453	1.12
.....	D-350-56	5/16	.468	.388	1.12
D-351-56	B-3207	5/16	.583	.453	1.12
D-352-12	B-3289	1/2	.810	.636	1.69

INSULKRIMP®

.....	D-650-06X	6	.468	.388	\$1.10
D-650-10X	T-2202	10	.468	.388	1.10
D-651-10X	T-2205	10	.583	.453	1.10
D-650-14X	T-2203	1/4	.468	.388	1.60
D-651-14X	T-2206	1/4	.583	.453	1.60
.....	D-650-56X	5/16	.468	.388	1.60
D-651-56X	T-2207	5/16	.583	.453	1.60
D-652-12X	T-2289	1/2	.810	.636	1.60

NYLAKRIMP®

.....	D-750-06	6	.468	.388	\$1.13
D-750-10	N-5202	10	.468	.388	1.13
D-751-10	N-5205	10	.583	.453	1.13
D-750-14	N-5203	1/4	.468	.388	1.63
D-751-14	N-5206	1/4	.583	.453	1.63
.....	D-750-56	5/16	.468	.388	1.63
D-751-56	N-5207	5/16	.583	.453	1.63
D-752-12	N-5289	1/2	.810	.636	1.83

6 WIRE RANGE

.....	E-357-08	8	.643	.511	\$1.38
.....	E-358-10	10	.825	.603	1.48
E-357-14	B-3229	1/4	.643	.511	1.38
E-357-56	B-3230	5/16	.643	.511	1.38
.....	E-358-38	3/8	.825	.603	1.48
E-357-76	B-3232	7/16	.643	.511	1.48
E-358-12	B-3244	1/2	.825	.603	1.48
E-358-58	B-3245	5/8	.825	.603	1.48

INSULKRIMP®

.....	E-657-08X	8	.643	.511	\$2.04
.....	E-657-10X	10	.825	.603	2.04
E-657-14X	T-2229	1/4	.643	.511	2.04
E-657-56X	T-2230	5/16	.643	.511	2.04
E-657-38X	T-2231	3/8	.643	.511	2.04
E-657-76X	T-2232	7/16	.643	.511	2.04
E-658-12X	T-2244	1/2	.825	.603	2.09
E-658-58X	T-2245	5/8	.825	.603	2.09

NYLAKRIMP®

.....	E-757-08	8	.643	.511	\$2.09
.....	E-757-10	10	.825	.603	2.09
E-757-14	N-5229	1/4	.643	.511	2.09
E-757-56	N-5230	5/16	.643	.511	2.09
E-757-38	N-5231	3/8	.643	.511	2.09
E-757-76	N-5232	7/16	.643	.511	2.13
E-758-12	N-5244	1/2	.825	.603	2.13
E-758-58	N-5245	5/8	.825	.603	2.13

4 WIRE RANGE

VERSAKRIMP™						
F-366-14	B-3252	1/4	.665	.547		\$1.75
F-366-56	B-3253	5/16	.665	.547		1.75
F-366-38	B-3254	3/8	.665	.547		1.75
.....	F-366-12	1/2	.665	.547		1.16
F-369-12	B-3883	1/2	.885	1.016		1.75

INSULKRIMP®

F-666-14X	T-2252	1/4	.665	.547	\$2.25
F-666-56X	T-2253	5/16	.665	.547	2.25
F-666-38X	T-2254	3/8	.665	.547	2.25
.....	F-666-12X	1/2	.665	.547	2.25
F-669-12X	T-2883	1/2	.885	1.016	2.25

2 WIRE RANGE

Molex No.	Waldom No.	Stud Size	W.	C.	Price Each Pkg./5
VERSAKRIMP™					
G-374-14	B-3887	1/4	.864	.703	\$2.39
.....	G-374-56	5/16	.864	.703	2.39
G-374-38	B-3891	3/8	.864	.703	2.39
G-374-12	B-3288	1/2	.864	.703	2.39
.....	G-374-58	5/8	.864	.703	2.39

INSULKRIMP®

G-674-14X	T-2887	1/4	.864	.703	\$2.76
G-674-38X	T-2891	3/8	.864	.703	2.76
G-674-12X	T-2288	1/2	.864	.703	2.76
.....	G-674-58X	5/8	.864	.703	2.76

NYLAKRIMP®

G-774-14	N-5887	1/4	.864	.703	\$2.83
.....	G-774-56	5/16	.864	.703	2.83
G-774-38	N-5891	3/8	.864	.703	2.83
G-774-12	N-5288	1/2	.864	.703	2.83
.....	G-774-58	5/8	.864	.703	2.83

1/0 WIRE RANGE

Molex No.	Waldom No.	Stud Size	W.	Radius Max.	Price Each Pkg./5
VERSAKRIMP™					
.....	H-381-14	1/4	.820	.770	\$2.67
.....	H-381-56	5/16	.820	.770	2.67
.....	H-381-38	3/8	.820	.770	2.67
.....	H-380-38	3/8	.882	.770	2.67
.....	H-380-12	1/2	.882	.770	2.67

NYLAKRIMP®

H-781-14	N-5327	1/4	.820	.770	\$4.04
H-781-56	N-5328	5/16	.820	.770	4.04
.....	H-781-38	3/8	.820	.770	4.04
H-780-38	N-5329	3/8	.882	.770	4.04
H-780-12	N-5331	1/2	.882	.770	4.04

2/0 WIRE RANGE

VERSAKRIMP™					
J-385-14	B-3292	1/4	.928	.760	\$4.32
J-385-56	B-3898	5/16	.928	.760	4.32
J-385-76	B-3900	7/16	.928	.760	4.32

NYLAKRIMP®

J-785-14	N-5292	1/4	.928	.760	\$5.18
J-785-56	N-5898	5/16	.928	.760	5.18
J-785-76	N-5900	7/16	.928	.760	5.18

3/0 WIRE RANGE

VERSAKRIMP™					
K-390-38	B-3907	3/8	1.047	.825	\$4.78
K-390-76	B-3908	7/16	1.047	.825	4.78
K-390-58	B-3911	5/8	1.047	.825	4.78

NYLAKRIMP®

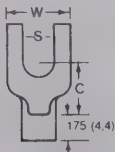
K-790-38	N-5907	3/8	1.047	.825	\$6.52
K-790-76	N-5908	7/16	1.047	.825	6.52
K-790-58	B-5911	5/8	1.047	.825	6.52

4/0 WIRE RANGE

VERSAKRIMP®					
.....	L-395-38	3/8	1.115	.850	\$5.02
.....	L-395-12	1/2	1.115	.850	5.02

NYLAKRIMP®

.....	L-795-38	3/8	1.115	.850	\$6.33
.....	L-795-12	1/2	1.115	.850	6.33



SPADE TONGUE TERMINALS

Molex No.	Waldom No.	Stud Size	W	C	Price Each Pkg., 100
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26-24 WIRE RANGE

KRIMPITITE®

.....	M-1116-02	2	.192	.215	\$ 2.80
M-1121-04	M-1112-04	4	.213	.215	2.80

AVIKRIMP®

.....	M-8116-02	2	.192	.215	\$ 9.90
.....	M-8121-04	4	.218	.215	9.00

22-18 WIRE RANGE

KRIMPITITE®

AA-135-08	SS-1809	8	.326	.303	\$ 2.80
AA-135-10	SS-1709	10	.326	.303	2.80

INSULKRIMP®

AA-235-08X	ST-2809	8	.326	.303	\$ 5.70
AA-235-10X	ST-2709	10	.326	.303	5.70

VIBRAKIMP®

.....	AA-435-08	8	.326	.303	\$11.90
.....	AA-435-10	10	.326	.303	11.90

16-14 WIRE RANGE

KRIMPITITE®

.....	BB-107-04	3-4	.255	.209	\$ 2.80
.....	BB-107-06	5-6	.255	.209	2.80
BB-127-10	SS-1533	10	.372	.269	2.80

INSULKRIMP®

.....	BB-207-04X	3-4	.255	.209	\$ 5.70
.....	BB-207-06X	5-6	.255	.209	5.70
.....	BB-227-10X	10	.372	.269	5.70

VIBRAKIMP®

.....	BB-407-04	3-4	.255	.209	\$ 7.90
.....	BB-407-06	5-6	.255	.209	7.90
.....	BB-427-10	10	.372	.269	7.80

AVIKRIMP®

.....	BB-807-04	3-4	.255	.209	\$ 9.20
.....	BB-807-06	5-6	.255	.209	9.20
.....	BB-827-10	10	.372	.269	9.00

SNAP SPADE TERMINALS

Molex No.	Waldom No.	Stud Size	W	C	Price Each Pkg., 100
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22-18 WIRE RANGE

KRIMPITITE®

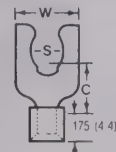
AA-1704-06	S-1358	5-6	.260	.230	\$ 3.10
AA-1191-08	S-1347	8	.300	.235	3.10
AA-1714-08	S-1359	8	.320	.261	3.10
AA-1715-10	S-1360	10	.340	.261	3.10

INSULKRIMP®

AA-2704-06X	T-2358	5-6	.260	.230	\$ 6.50
AA-2190-06X	T-2346	5-6	.270	.235	6.50
AA-2191-08X	AA-2190-08X	8	.300	.235	6.50
.....	AA-2714-08X	8	.320	.261	6.50
AA-2715-10X	T-2360	10	.340	.261	6.50

VIBRAKIMP®

.....	AA-4704-06	5-6	.260	.230	\$12.10
.....	AA-4190-06	5-6	.270	.235	2.90
.....	AA-4191-08	8	.300	.235	2.90
.....	AA-4714-08	8	.320	.261	12.30
.....	AA-4715-10	10	.340	.261	12.30



SNAP SPADE TERMINALS

Molex No.	Waldom No.	Stud Size	W	C	Price Each Pkg., 100
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AVIKRIMP®

AA-8704-06	N-5358	5-6	.260	.230	\$9.20
AA-8190-06	N-5345	5-6	.270	.235	9.20
AA-8191-08	N-5347	8	.300	.235	9.20
AA-8714-08	N-5359	8	.320	.261	9.20
AA-8715-10	N-5360	10	.340	.261	9.20

16-14 WIRE RANGE

KRIMPITITE®

BB-1707-06	S-1362	5-6	.260	.230	\$3.10
BB-1193-06	S-1349	5-6	.345	.235	3.10
BB-1194-08	S-1350	8	.300	.235	3.10
.....	BB-1716-08	8	.320	.261	3.10
.....	BB-1195-10	10	.338	.235	3.10
BB-1717-10	N-1351	10	.340	.261	3.10

SNAP SPADE TERMINALS

Molex No.	Waldom No.	Stud Size	W	C	Price Each Pkg., 100
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16-14 WIRE RANGE

INSULKRIMP®

BB-2707-06X	T-2362	5-6	.260	.230	\$ 6.50
BB-2193-06X	T-2349	5-6	.270	.235	6.50
BB-2194-08X	T-2350	8	.300	.235	6.50
.....	BB-2716-08X	8	.320	.261	6.50
BB-2717-10	T-2351	10	.340	.261	6.50

VIBRAKIMP®

.....	BB-4707-06	5-6	.260	.230	\$ 8.30
.....	BB-4193-06	5-6	.270	.235	7.70
.....	BB-4194-08	8	.300	.235	7.80
.....	BB-4716-08	8	.320	.261	8.40
.....	BB-4195-10	10	.338	.235	7.80
.....	BB-4717-10	10	.340	.261	8.40

AVIKRIMP®

BB-8707-06	N-5362	5-6	.260	.230	\$ 9.20
BB-8193-06	N-5349	5-6	.270	.235	9.20
BB-8194-08	N-5350	8	.300	.235	9.20
.....	BB-8716-08	8	.320	.261	9.20
.....	BB-8195-10	10	.338	.235	9.20
BB-8717-10	N-5351	10	.340	.261	9.20

12-10 WIRE RANGE

KRIMPITITE®

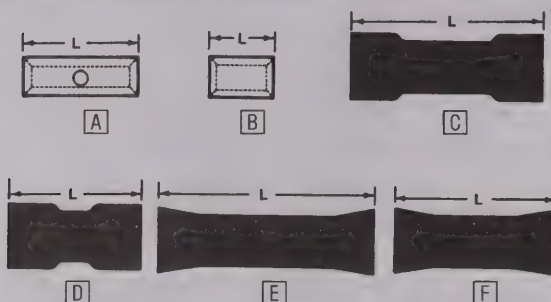
C-1710-06	S-1366	5-6	.260	.230	\$ 5.40
C-1196-06	S-1352	5-6	.300	.305	5.40
.....	C-1197-08	8	.330	.305	4.20
C-1718-08	S-1353	8	.310	.261	5.40
C-1198-10	S-1354	10	.330	.305	5.40
C-1719-10	S-1368	10	.340	.261	5.40

INSULKRIMP®

C-2710-06X	T-2366	6	.260	.230	\$ 8.80
C-2196-06X	T-2352	6	.300	.305	8.80
.....	C-2197-08X	8	.330	.305	8.80
C-2718-08X	T-2353	8	.310	.261	8.80
.....	C-2198-10X	10	.330	.305	8.80
C-2719-10X	T-2354	10	.340	.261	8.80

VIBRAKIMP®

.....	C-4710-06	5-6	.260	.230	\$13.10
.....	C-4196-06	5-6	.300	.305	13.30
.....	C-4718-08	8	.330	.305	13.60
.....	C-4718-08	8	.310	.261	13.60
.....	C-4198-10	10	.330	.305	13.00
.....	C-4719-10	10	.340	.261	13.80



NONINSULATED SPLICES

VERSAKRIMP® SEAMLESS

Butt Splice (Fig. A)

Molex No.	Waldom No.	Wire Range	Max. Length	Price Per 100
AS-345	B-3019	22-18	.675	\$ 6.10
BS-331	B-3020	16-14	.675	6.10
CS-346	B-3046	12-10	.827	8.90

Parallel Splice (Fig. B)

Molex No.	Waldom No.	Wire Range	Max. Length	Price Per 100
AS-302	B-3105	22-18	.330	\$ 2.90
BS-304	B-3063	16-14	.330	5.50
CS-303	B-3064	12-10	.330	10.30

INSULATED SPLICES

INSULKRIMP® PVC INSULATED

Butt Splice (Fig. C)

Molex No.	Waldom No.	Wire Range	Max. Length	Price Per 100
A-245X	T-2019	22-18	.955	\$ 3.60
B-231X	T-2020	16-14	1.020	5.10
.....	BS-V-331X	16-14	1.080	5.90
C-246X	T-2046	12-10	1.135	7.50

Parallel Splice (Fig. D)

Molex No.	Waldom No.	Wire Range	Max. Length	Price Per 100
B-204X	T-2063	16-14	.735	\$ 6.00
C-203X	T-2064	12-10	.831	8.80

NYLAKRIMP® NYLON INSULATED

Butt Splice (Fig. E)

Molex No.	Waldom No.	Wire Range	Max. Length	Price Per 100
AS-N-345	N-5019	22-18	1.035	\$ 5.80
BS-N-331	N-5020	16-14	1.080	5.80
CS-N-346	N-5046	12-10	1.300	11.60

Parallel Splice (Fig. F)

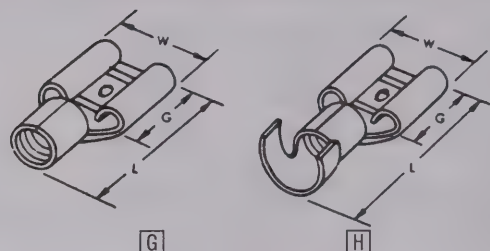
Molex No.	Waldom No.	Wire Range	Max. Length	Price Per 100
AS-N-302	N-5105	22-18	.670	\$ 9.10
BS-N-304	N-5063	16-14	.645	9.10
CS-N-303	N-5046	12-10	1.300	13.80

†Part has seamless barrel instead of butted seam.

NYLON CLOSED END CONNECTORS

Nylon, closed-end connectors are a two-piece construction, which are rated for a maximum of 600 volts. A translucent nylon molded insulation is adhered to the metal connector insert. The connector's insert is tin-plated, seamless, pure electrolytic copper.

Molex No.	Waldom No.	Circular Wire Range	Mil Area	Price Per 100
.....	NC-2214	22-14	600-51800	\$4.40
NC-2212	CE-2214	22-12	600-8230	4.90
NC-1610	CE-1610	16-10	2200-13100	6.70



QUICK—CONNECTS

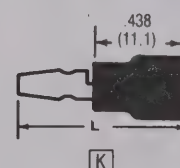
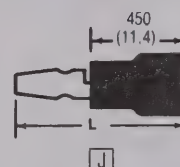
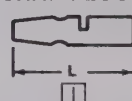
KRIMPTITE® UNINSULATED BUTTED SEAM BARREL (Fig. G)

Molex No.	Waldom No.	Wire Range	Fits Tab Size Inch	Price Per 100
AA-1140	SS-1727	22-18	250-032	\$3.20
BB-1141	SS-1090	16-14	250-032	3.20
P-1142	SS-1188	14-12	250-032	4.50
AA-1137	SS-1759	22-18	187-020	3.20
BB-1138	SS-1187	16-14	187-020	3.20

VIBRAKRIMP® VIBRATION SUPPORT BARREL (Fig. H)

Molex No.	Waldom No.	Wire Range	Fits Tab Size Inch	Price Per 100
.....	AA-4176	22-18	250-032	\$3.70
.....	BB-4177	16-14	250-032	3.00
.....	P-4178	14-12	250-032	3.70
.....	AA-4173	22-18	187-020	3.00
.....	BB-4174	16-14	187-020	2.90

SNAP PLUGS



KRIMPTITE® (Fig. I)

Molex No.	Waldom No.	Wire Range	Diameter	Length	Price Per 100
B-179	S-1056	16-14	.176	.531	\$ 4.50
B-189	S-1055	16-14	.157	.593	4.50

INSULKRIMP® (Fig. J)

Molex No.	Waldom No.	Wire Range	Diameter	Length	Price Per 100
B-279X	T-2056	16-14	.176	.855	\$ 8.50
B-289X	T-2055	16-14	.157	.855	8.50

AVIKRIMP® (Fig. K)

Molex No.	Waldom No.	Wire Range	Diameter	Length	Price Per 100
B-579	N-5056	16-14	.176	.865	\$11.10
B-589	N-5055	16-14	.157	.865	11.10

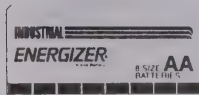
CALL US FOR INFORMATION ON ANY UNLISTED PARTS OR EQUIPMENT.

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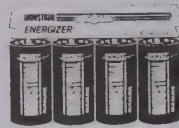


Batteries

EVEREADY® INDUSTRIAL COUNTER PAKS



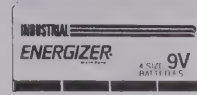
EN91-8



EN93-4



EN95-4



EN22-4

Eveready Number	Volt or Size	Case/Package UPC#	Stock Loc.	Standard Package			Dealer Unit	Sugg. Price Each
				Quan.	Wt.	Cube		
EN91-8	AA	04193	A	48	20.5	.38	X	\$ 9.23
EN93-4	C	04194	A	24	14.6	.32	12	6.92
EN95-4	D	04197	A	24	30.9	.62	12	7.75
EN22-4	9	05054	A	24	10.8	.10	X	13.60

EVEREADY® INDUSTRIAL MEDICAL BATTERIES

Eveready Number	Volt or Size	Case/Package UPC#	Stock Loc.	Standard Package			Dealer Unit	Sugg. Price Each
				Quan.	Wt.	Cube		
EV146X	9	03359	C	24	2.8	.1	6	\$ 7.42
EV9	AA	03358	C	24	1.7	.1	4	4.64
AC146X	9	04021	C	72	6.2	.4	12	7.42
E133N	4.05	02099	C	10	1.0	.01	2	10.00

EVEREADY® ELECTRONICS

Eveready Number	Volt or Size	Case/Package UPC#	Stock Loc.	Standard Package			Dealer Unit	Sugg. Price Each
				Quan.	Wt.	Cube		
1461	6	01372	C	4	26.0	.56	X	\$32.96
1463	12	01373	C	4	27.1	.59	X	49.96
1862	12	01419	O	2	25.8	.39	X	56.65
206	9	01036	C	12	.9	.01	1	4.74
226	9	01182	C	12	1.4	.02	6	6.80
2356N	9	01420	C	6	5.8	.08	X	20.60
246	9	01188	C	6	1.8	.73	X	9.48
266	9	01189	C	12	5.2	.08	X	9.17
2744N	6	01441	C	12	16.3	.22	X	6.08
276	9	01190	C	6	5.6	.07	X	12.67
411	15.0	01144	C	6	.4	.01	X	5.36
412	22.5	01334	C	12	1.1	.02	X	5.36
413	30	01145	C	12	1.4	.02	X	6.28
415	45	01223	C	6	1.1	.01	X	10.91
416	67.5	01224	C	6	1.5	.02	X	13.39
455	45	01227	C	6	3.2	.04	X	18.18
457	67.5	01228	C	6	3.1	.05	X	29.76
467	67.5	01231	C	12	9.2	.12	X	22.04
489	225	01268	C	6	16.8	.30	2	74.68
490	90	01239	C	6	6.5	.08	X	31.42
493	300	01241	C	3	3.4	.07	X	52.94
497	510	01242	C	4	7.4	.12	X	76.22
504	15	01386	C	12	.5	.01	X	4.77
505	22.5	01362	C	12	.7	.01	X	7.21
706	6	01272	C	4	25.4	.46	X	38.52
711	F	01274	C	6	4.3	.08	X	12.46
732	12	01282	C	6	17.4	.32	X	15.97
735	1.5	01259	C	12	17.3	.25	X	7.42
736	4.5	01284	C	6	5.5	.10	X	16.27
763	22.5	01291	C	6	4.6	.29	X	24.93
1212	1.5	04110	C	48	.9	.02	X	.72

CONSULT OUR STAFF OF
ELECTRONICS EXPERTS ON ALL YOUR SPECIAL
EQUIPMENT OR COMPONENT NEEDS.



Batteries

HERCULES® TELECOMMUNICATIONS BATTERIES



HS6571



HS7105



HS6570



HS14196

"Hercules" Stock No.	UPC No.	Stock Loc.	Description	Standard Package		Dealer Unit	Sugg. Price Each
				Quan.	Wt.		
HS6570	02074	O	4.5 Volt Telephone Battery	10	10.5	X	\$21.12
HS6571	09951	O	24 Volt Telephone Battery	20	16.9	5	23.69
HS7105	09952	O	22.5 Volt Telephone Battery	10	12.5	X	46.00
HS14196	09954	O	45 Volt Telephone Battery	15	17.6	X	14.73

EVEREADY® INDUSTRIAL GENERAL PURPOSE BATTERIES

Eveready Number	Volt or Size	Case/Package UPC#	Stock Loc.	Standard Package			Dealer Unit	Sugg. Price Each
				Quan.	Wt.	Cube		
EV6	1.5	05074	C	20	31.0	.63	X	\$13.60
EV15	AA	01931	A	192	7.1	.110	24	.46
EV35	C	01933	A	192	18.0	.277	24	.60
EV50	D	01934	A	192	36.6	.550	24	.66
EV22	9	02688	A	72	5.9	.078	12	1.22
EV90	6	01935	A	12	16.1	.256	X	4.02
EV10S	6	01930	A	12	16.4	.251	X	5.25
EV31	6	01932	A	6	17.4	.309	X	11.74
1862	12	01419	O	2	25.8	.390	X	56.65
715	7.5	01277	A	4	27.9	.560	X	39.14
716	9	01278	C	4	35.5	.650	X	43.26

EVEREADY® INDUSTRIAL HEAVY DUTY BATTERIES

Eveready Number	Volt or Size	Case/Package UPC#	Stock Loc.	Standard Package			Dealer Unit	Sugg. Price Each
				Quan.	Wt.	Cube		
EV115	AA	01925	A	192	7.1	.110	24	\$0.56
EV135	C	01927	A	192	17.5	.277	24	.70
EV150	D	01928	A	192	37.7	.627	24	.74
EV122	9	01926	A	72	6.9	.078	12	1.77

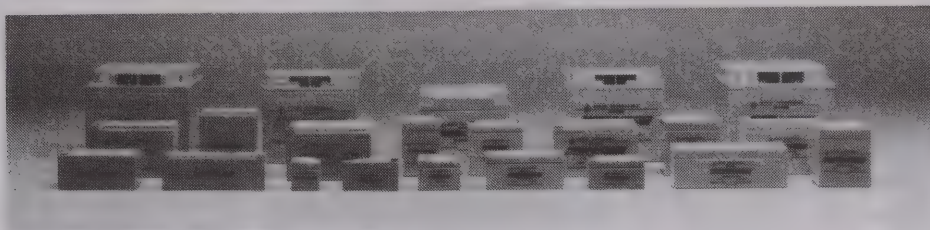
ENERGIZER® INDUSTRIAL ALKALINE BATTERIES

Eveready Number	Volt or Size	Case/Package UPC#	Stock Loc.	Standard Package			Dealer Unit	Sugg. Price Each
				Quan.	Wt.	Cube		
EN6	1.5	05953	C	20	21.0	.700	24	\$15.00
EN91	AA	01919	A	144	7.92	.087	24	1.15
EN92	AAA	01920	A	48	1.3	.017	12	1.15
EN93	C	01921	A	72	10.8	.114	12	1.73
EN95	D	01922	A	72	21.9	.229	12	1.94
EN22	9	01912	A	72	7.3	.074	12	3.40
EN715	7.5	01923	A	4	20.1	.343	X	42.23
EN529	6	05543	A	12	24.4	.336	12	12.57

EVEREADY® SPECIAL APPLICATIONS BATTERIES

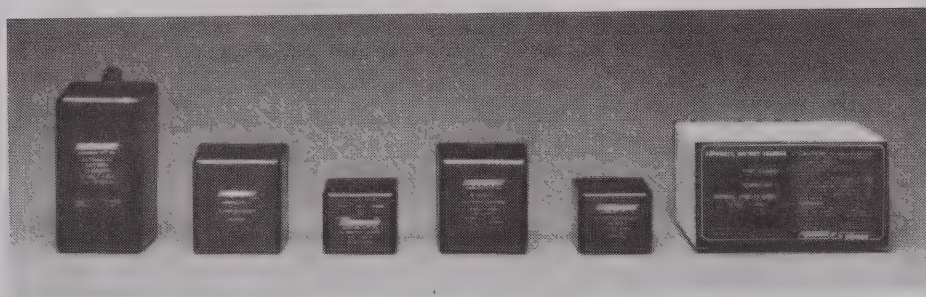
Eveready Number	Volt	Case/Package UPC#	Stock Loc.	Standard Package			Dealer Unit	Sugg. Price Each
				Quan.	Wt.	Cube		
E1	1.4	04300	C	20	.65	.01	4	\$ 2.80
E132N	2.7	02098	C	10	.7	.01	2	7.00
E133	4.2	04305	C	24	2.3	.02	6	9.00
E134	5.6	04306	C	10	1.3	.01	2	11.00
E134N	5.4	02100	C	10	1.4	.01	2	11.50
E135N	6.75	02102	C	10	1.7	.01	2	13.00
E136	8.4	04307	C	10	1.9	.01	2	14.00
E146X	8.4	04308	C	24	3.0	.01	6	8.00
E164BP	5.6	03606/09798	C	6	6.5	.05	X	8.50
E165	7	04311	C	10	.9	.01	2	11.50
E1N	1.35	02078	C	20	.7	.01	4	3.00
E303996	8.4	03203	C	24	2.75	.01	6	12.00
E4	1.35	04383	C	20	1.9	.01	X	8.00
E401E-2	1.4	01392	C	10	.6	.01	X	5.00
E401N	1.35	02472	C	20	.6	.01	2	3.80
E640	1.4	04319	C	20	.40	.01	X	2.30
E9	1.4	04320	C	24	1.7	.01	4	5.50
EP175	7	02918	C	12	.38	.01	X	7.90
EP401E-2	1.4	02846	C	10	.6	.01	X	5.10
L31	3.6	08865	O	20	.75	.01	X	9.00

RECHARGEABLE SEALED LEAD-ACID BATTERIES



Model	Nom. Volt.	Rated Capacity (Amp. Hrs.)	Length (In.)	Width (In.)	Height (In.)	Weight (Lbs.)	Price Each
PS-445	4	4.5	1.93	2.09	3.70	1.5	\$ 14.25
PS-490	4	9.0	4.02	1.73	3.70	2.4	17.70
PS-605	6	0.5	2.24	0.55	1.97	.2	9.15
PS-610	6	1.0	2.00	1.65	2.00	0.6	10.50
PS-612	6	1.2	3.82	0.94	2.00	0.6	9.35
PS-620	6	2.0	2.95	2.00	2.09	1.1	13.60
PS-630	6	3.0	5.28	1.34	2.35	1.5	14.90
PS-632	6	3.2	2.60	1.30	4.84	1.5	15.25
PS-640F	6	4.0	2.76	1.89	4.02	1.8	12.10
PS-640WL	6	4.0	...	...	...	...	13.40
PS-650L	6	5.0	2.63	2.63	3.78	2.0	12.10
PS-665	6	6.5	3.86	2.20	4.05	3.0	19.15
PS-670	6	7.0	5.95	1.34	3.70	3.0	13.40
PS-682F	6	8.0	3.86	2.20	4.65	3.3	15.65
PS-682WL	6	8.0	...	...	...	...	17.10
PS-695	6	9.5	4.26	2.75	5.54	4.9	17.50
PS-6100	6	10.0	5.95	2.00	3.70	4.6	17.65
PS-6120	6	12.0	4.26	2.75	5.54	5.5	18.65
PS-6200	6	20.0	6.18	3.27	4.92	8.2	51.35
PS-6360	6	36.0	6.25	3.35	6.50	13.8	45.35
PS-1207	12	0.7	3.78	0.98	2.42	0.8	17.75
PS-1212	12	1.2	3.82	1.65	2.00	1.3	16.60
PS-1220	12	2.0	7.01	1.34	2.36	1.9	19.60
PS-1226	12	2.6	7.01	1.34	2.36	2.2	21.40
PS-1230	12	3.0	5.23	2.64	2.36	2.6	22.90
PS-1232	12	3.2	7.68	1.85	2.76	3.1	25.60
PS-1242	12	4.0	3.54	2.76	3.98	3.8	19.60
PS-1252	12	5.0	3.54	2.76	4.02	4.2	21.40
PS-1270	12	7.0	5.95	2.56	3.70	5.7	21.10
PS-1282	12	8.0	3.86	4.40	4.65	6.7	33.15
PS-1295	12	9.5	8.38	2.75	5.50	10.0	34.90
PS-12100	12	10.0	5.95	4.00	3.70	9.2	37.40
PS-12120	12	12.0	5.94	3.86	3.70	9.0	44.85
PS-12120L	12	12.0	8.38	2.75	5.50	11.0	39.10
PS-12170	12	17.0	7.13	2.99	6.57	12.8	55.50
PS-12180	12	17.5	7.13	2.99	6.57	13.0	55.50
PS-12260	12	26.0	6.89	6.54	4.92	18.7	74.15
PS-12280	12	28.0	6.54	4.92	6.89	19.4	77.65
PS-12330	12	33.0	7.68	5.19	6.38	26.5	69.65
PS-12400	12	40.0	7.75	6.50	6.69	30.9	102.90
PS-12500	12	50.0	9.40	5.50	8.20	36.0	97.50
PS-12600	12	60.0	10.25	6.60	8.20	46.0	115.60
PS-12800	12	80.0	12.00	6.60	8.20	55.0	147.50

BATTERY CHARGERS



Model	Voltage	Rating	Type	Length (In.)	Width (In.)	Height (In.)	Price Each
PSC-6250F	6	.30A	Fixed volt. float	2.20	1.96	1.88	\$ 28.00
PSC-6300A	6	.25A	Dual volt. auto.	2.55	2.55	3.65	36.05
PSC-6500A	6	.50A	Dual volt. auto.	2.55	1.88	2.89	42.30
PSC-64000A	6	4.00A	Dual volt. auto.	5.70	5.80	3.30	107.70
PSC-64000A	6	.25A	Fixed volt. float	2.20	1.96	1.88	28.00
PSC-12250F	12	.25A	Dual volt. auto.	2.55	2.55	3.65	36.05
PSC-12300A	12	.30A	Dual volt. auto.	2.55	1.88	2.89	29.15
PSC-12500F	12	.50A	Fixed volt. float	2.55	1.88	2.89	42.30
PSC-12500A	12	.50A	Dual volt. auto.	2.55	2.55	3.65	36.05
PSC-12800A	12	.75A	Dual volt. auto.	5.70	5.80	3.30	107.70
PSC-124000A	12	4.00A	Dual volt. auto.	7.95	6.10	4.50	226.75
PSC-12-10A	12	10.00A	Dual volt. auto.	...	...	...	...

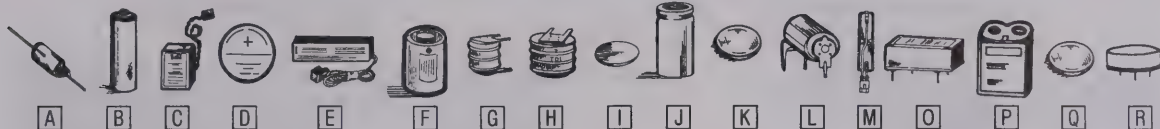
NICKEL-CADMIUM BATTERIES



Model	Nom. Volt.	Rated Capacity (mAh)	Dia. In.	Dia. mm	Height In.	Height mm	Price Each
PS-1/2AA	1.2	110	0.571	14.5	0.669	17.0	\$ 1.65
PS-N	1.2	150	0.473	12.0	1.142	29.0	2.15
PS-AAA	1.2	200	0.413	10.5	1.752	44.5	2.15
PS-3/4AA	1.2	270	0.547	13.9	1.222	28.5	1.60
PS-AA	1.2	600	0.547	13.9	1.870	47.5	1.65
PS-SC	1.2	1300	0.906	23.0	1.693	43.0	2.90
PS-C	1.2	2000	1.024	26.0	1.969	50.0	5.00
PS-1/2D	1.2	2200	1.271	32.3	1.448	36.8	5.65
PS-D	1.2	4000	1.339	34.0	2.421	61.5	8.50
PS-F	1.2	7000	1.339	34.0	3.583	91.5	16.00
PS-TR7	9.0	110	L:26mm	W:17mm	1.909	48.5	15.65
HIGH TEMPERATURE CELLS							
PS-1/2AAH	1.2	110	0.571	14.5	0.669	17.0	\$ 1.65
PS-AAH	1.2	500	0.547	13.9	1.870	47.5	1.65
PS-SCH	1.2	1200	0.906	23.0	1.692	43.0	2.90
PS-CH	1.2	2000	1.024	26.0	1.969	50.0	5.00
PS-1/2DH	1.2	2200	1.271	32.3	1.448	36.8	5.85
PS-DH	1.2	4000	1.339	34.0	2.421	61.5	8.50
HIGH CAPACITY CELLS							
PS-AAx	1.2	700	0.547	13.9	1.870	47.5	\$ 2.15
PS-SCx	1.2	1500	0.875	22.2	1.662	42.2	3.35
PS-Cx	1.2	2400	1.024	26.0	1.969	50.0	5.65
PS-Dx	1.2	5000	1.339	34.0	2.421	61.5	10.30
HIGH RATE CHARGE & DISCHARGE CELLS							
PS-1/2A	1.2	1000	0.669	17.0	1.693	43.0	\$ 3.60
PS-A	1.2	1200	0.669	17.0	1.929	49.0	3.85
PS-SCF	1.2	1400	0.875	22.2	1.662	42.2	3.35
PS-CF	1.2	2400	1.024	26.0	1.969	50.0	5.75
PS-1/2DF	1.2	2200	1.271	32.3	1.448	36.8	5.75
PS-DF	1.2	4500	1.274	32.4	2.374	60.3	9.40
HIGH CAPACITY—RAPID CHARGE CELLS							
PS-AAxF	1.2	700	0.571	14.5	1.988	50.5	\$ 2.35
PS-SCxF	1.2	1800	0.875	22.2	1.662	42.2	4.00
PS-CxF	1.2	2500	1.024	26.0	1.969	50.0	6.90
PS-DxF	1.2	5000	1.274	32.4	2.295	58.3	10.30
PCBM (PRINTED CIRCUIT BOARD MOUNT) MEMORY SAVE CELLS							
PCBM-2.4	2.4	110	0.571	14.5	1.350	34.5	\$ 5.40
PCBM-3.6	3.6	110	0.571	14.5	2.015	52.0	7.65
BUTTON CELLS							
PS-B60	1.2	60	0.61	15.5	0.24	6.20	\$ 1.10
PS-B100	1.2	100	0.59	15.0	0.30	7.70	1.25
PS-B170	1.2	170	0.99	25.1	0.26	6.70	1.35
PS-B280	1.2	280	0.99	25.1	0.35	9.00	1.50



PERSONAL COMPUTER BATTERIES



Manufacturer	Model	TDI P/N	Fig.	Manufacturer	Model	TDI P/N	Fig.
ABM Computer System	512-MCR, Mini I/O	BR2325	D	IDE Associates	Allaboard	BR2325	D
Acer	AT286, 910	TL5293/W	D	Overboard	BR2325	BR2325	D
Advantage	AT	TL5293/W	C	B-520, 530	3/60DK-PC	3/60DK-PC	G
ACR	All Systems	3/60DK-PC	G	286, 386	TL5242/W	TL5242/W	E
Altair Exchange Corp.	Disk Multi/I/O	BR2325	D	Compatible Pack	BR2325	BR2325	D
	MFXT100	3/60DK-PC	G	Function Pack 512	BR2325	BR2325	D
Altos	586 Multi User	BR2325	D	PC Multi Pack	BR2/3A	BR2/3A	J
	600, 1000, 2000, 3600	TL5135	R	286MB	TL5293/W	TL5293/W	C
Amdek	286, 286A 386, 386A	TL5293/W	C	Short Stack	BR2325	BR2325	R
	System 88, MDL, 1000	TL5135	R	Combo-Board	TL5135	TL5135	C
American Computer	AT	TL5293/W	C	XTRA/286ATW	TL5293/W	TL5293/W	Q
Ampton	Multi-Card	3/60DKPC	G	Multifunction Board	CR2016	CR2016	A
Apparat, Inc.	Crambo, Crambo II, Limbo 1411	BR2325	D	Kaypro PC (Old)	TL5101/P	TL5101/P	A
Apple	II GS, MAC-SE, IIE	TL5101/P	A	Kaypro PC (New)	TL5242/W	TL5242/W	E
	Macintosh	CR14250SE	F	Pacer 386	TL5293/W	TL5293/W	C
AST	Monograph Plus, AST-3B-IO, AST-3B-PAK	BR2325	D	Pacer 286	3/60DK-PC,	3/60DK-PC,	G, E
	Six Pack Plus/Prem.	BR2325	D		TL5242/W	TL5242/W	G
	Premium 286,	BR2325	D		3/60DK-PC	3/60DK-PC	G
	Premium 386	TL5293/W	C		BR2325	BR2325	D
	Preview I/O	CR1132N-P	L		CR2430	CR2430	I
AT&T	6310, 6312, 6386, 3B, 3BII	TL5293/W	C		TL5293/W	TL5293/W	C
	6300, 6300+	3/60DK-PC	G		Multi Function Board	BR2325	D
	7300	TL5101/P	A		GPB-488	BR2325	D
Basic Time	BT6 Plus	BR2325	D		PC-8, PC-3	TL5293/W	C
Bondwell	Bondwell 8	BR2325	D		266, T286A, 386, T386A	TL5293/W	C
Club	Club AT	TL5293/W	C		Omni Pak	BR2325	D
CMS	4 x 4 Function Plus	BR2325	D		Conquest	BR2325	D
Compaq	Portable II (New)	TL5293/W	C		Multifunction Card	BR2325	D
	Deskpro 286, 386	TL5293/W	C		PB286	TL5293/W	C
	Portable II (Old)	TL5104/S	B		PC's LTD MF BD	BR2325	C
	Portable 386, 386S	TL5283*	**		286 & 386	TL5293/W	C
	Desk Pro 386S, 20E	TL5283*	**		286	TL5293/W	C
	Portable 286	TL5283*	**		Silver Quad Board	BR2325	D
	Portable III-Newer	TL5283*	**		Rampage Model 256	3/100DKO-PC	**
Compuad/PC Source	Std. I/O	BR2325	D		Quadboard (Old)	2/100DKO-PC*	G
	Std. Multi Func.	BR2325	D		Quadboard (New)	3/60DK-PC	C
Cordata	Cordata	TL5104/S	B		3001, S-550, 286, 286S	TL5293/W	C
Corona	Corona P/C	TL5104/S	B		7500	TL5293/W	C
Corvus	Corvus AT	TL5293/W	C		PCA AT (Old)	TL5135	R
Dell	286, 386, 300, 310	TL5293/W	C		Targa 286	TL5104/S	B
Digiboard	Digigram 384	CGV3.6-100	O		PAC 286	TL5101/P	A
	Digigram 576	CGV3.6-100	O	Tandy	3000, 3000MD,	TL5293/W	C
Emulex/PERSVST	Color Combo Card	3/100DKO-PC	H		4000, 3000HL	TL5293/W	C
	Color Combo Card AT	3/100DKO-PC	H		PC-7, PC-8	CR2016	Q
	Mono Combo Card	3/100DKO-PC	H	Tatung	AT	TL5293/W	C
	Mono Combo Card AT	3/100DKO-PC	H	Tecmar	Captain (New)	BR2325	D
	SB2	3/100DKO-PC	H		Captain (Old)	CR2032	K
Epson	Epson Equity II	2CR17335SE-T-C2	M	Televideo	905, 9220, 955, PT100	CR1/3N-P	A
Everex, Inc.	Magic Card II	BR2325	D		Teloa's	TL5101/P	A
	1800B Computer	TL5242/W	E		Tele 386, 286	TL5293/W	C
	1300A Computer	TL5242/W	E		T1100 RTC B/U	CR2016	Q
	Disk I/O	CR2016	Q		T1100, T1200	TL5104/S	B
FIDA	286, 396	TL5293/W	C			(Clock Battery)	E
Five Star	1	TL5293/W	C			TL5242*	E
Goldstar	Vectra	TL5293/W	C			(Clock Battery)	D
Hewlett-Packard	PC	TL5293/W	C			BR2325	D
Hyundai	AT Models	TL5242/W	E			BR2325	B
	PS2/Model 50	BR-P2	P			TL5104/S	E
	PS2/Model 60	BR-P2	P			TL5242/W	E
	PS2/Model 80	BR-P2	P			TL5242/W	E
	XT286	BR-P2	P			TL5135	E
	PS2/Model 30	TL5101/P	A			TL5293/W	C
	8775 Display Terminal	TL5293/W	C			TL5101/P	A
	5170 AT Computer	TL5293/W	C			TL5101/P	A
			C			TL5104/S	B
			C			BR2325	D

*Check Factory Availability; **Not Pictured

NICKEL CADMIUM PAGER BATTERIES

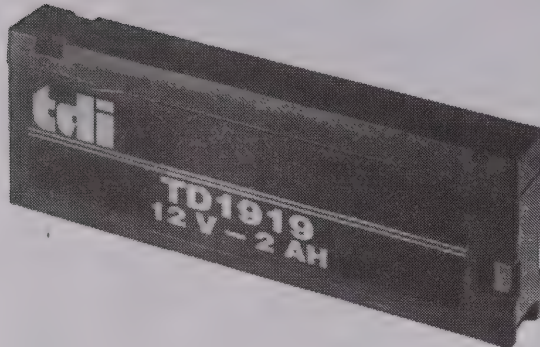
Part No.	Pager Models	Voltage	Rated Capacity (MAH)	Dimensions (H x K Inches)	Cross Reference
1-401-M	Spirit, Pageboy II, Pageboy III, Pagecom, Optx, Minitor, Dimension IV, Dimension 1000	1.3	150	1.24 x .46	NLN6965A, 60C5104A01
1-401-S	Motorola Metro, Cook's, Redicom Slimline	1.3	150	1.16 x .46	RF654, RF753
TDNRN	Multitone, Shinwa, Wespage, G.E. Exec. 2	1.3	150	1.16 x .45	P8LBW400, WNRN
101P-M	Motorola BPR2000 (tone & voice)	1.3	500	2.05 x .65	60-5842E02, NLN7057A

DISPOSABLE BATTERIES

DISPOSABLE BATTERIES						
Cross References	Alkaline		Mercury		Zinc Air	Lithium
Replaces	TDI Part No.	Cross-Ref.	TDI Part No.	Cross Ref.	TDI Part No.	TDI Part No.
101P	TDAA	E91,MN1500	E401E	RM401E		.....
1-401-M	TDN	E90,MN9100	E9	ZM9		.....
AAA Nicad	TDAAA	E92,MN2400				.....

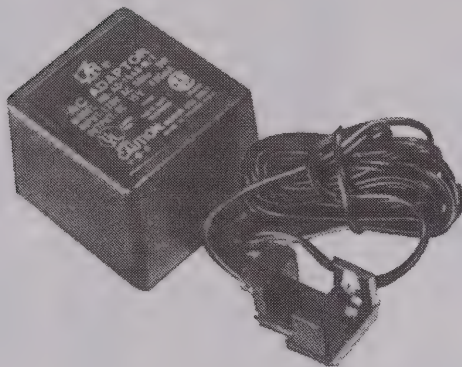
SPECIALTY BATTERIES

FOR POPULAR TRANS-PORTABLE
CELLULAR APPLICATIONS



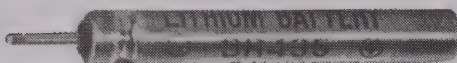
#TD1919
12v-2.3 AH LEAD ACID
BATTERY

CHARGER/ADAPTER FOR TD1919



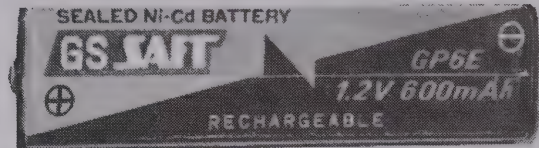
#CC12-20

FOR ELECTRONIC EARRINGS



#BR435
3 VOLT LITHIUM BATTERY

FOR SONY RECHARGEABLE
"MEGABASS" WALKMAN



#TD/GP6E *
1.2V-600 MAH "GUMSTICK"
NICAD RECHARGEABLE BATTERY

FOR AUTO ALARMS, REMOTES,
& CIGARETTE LIGHTER



DURACELL MN21
12 VOLT ALKALINE BATTERY

THROUGH OUR BUYING GROUP
ASSOCIATION WITH EDBA WE
CAN OFFER YOU ACCESS TO
MANY LINES NOT SHOWN IN
THIS CATALOG.

* CONTACT FACTORY FOR QUOTATION
MINIMUMS APPLY

CALL US FOR YOUR CUSTOM BATTERY NEEDS.

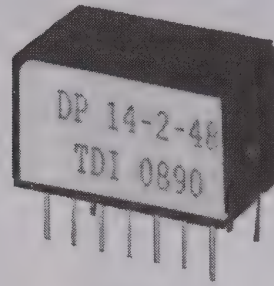
SPECIALTY BATTERIES

FOR HOTEL DOOR LOCKS



#HDL-6VA (2 × 2) *
6 VOLT ALKALINE BATTERY
2X2 CONFIGURATION

FOR ELECTRONIC SAFES



#TD/DP14-2-48
3 V SILVER OXIDE
BATTERY PACK

FOR PROGRAMMABLE CONTROLLERS
ALSO MEDICAL AND AIRLINE APPLICATIONS



RS 1/5 *
6 VOLT-1 AH NICAD
RECHARGEABLE BATTERY PACK

FOR HOTEL DOOR LOCKS



#HDL-6VA (1 × 4) *
6 VOLT ALKALINE BATTERY
1 × 4 CONFIGURATION

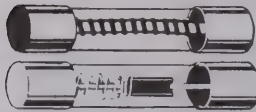
FOR HOTEL DOOR LOCKS



HDL-6VL *
6 VOLT LITHIUM BATTERY
1 × 2 CONFIGURATION

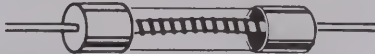
CALL US FOR YOUR CUSTOM
BATTERY NEEDS.

* CONTACT FACTORY FOR QUOTATION
MINIMUMS APPLY



Test specifications carry 110% open at 135% within 1 hour. UL listed 250V. UL recog. 32V. CSA certified. Formerly called 3AG. Ctn. qty. 5. Volts: 250V-175/1000-10; 32V-12-50.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
AGC-1/500	1/500	\$7.81	AGC-1 1/10	1 1/10	\$.37
AGC-1/200	1/200	7.81	AGC-2	2	.37
AGC-1/100	1/100	3.95	AGC-2 1/4	2 1/4	.37
AGC-1/32	1/32	3.99	AGC-2 1/2	2 1/2	.37
AGC-1/20	1/20	3.69	AGC-3	3	.37
AGC-1/16	1/16	1.23	AGC-3 3/10	3 3/10	.37
AGC-1/8	1/8	1.23	AGC-3 1/2	3 1/2	.37
AGC-1 1/100	1 1/100	1.23	AGC-4	4	.48
AGC-1 1/1000	1 1/1000	1.23	AGC-5	5	.48
AGC-3/16	3/16	1.23	AGC-6	6	.48
AGC-1/10	1/10	1.23	AGC-6 1/4	6 1/4	.48
AGC-3/10	3/10	1.23	AGC-7	7	.48
AGC-1/4	1/4	.68	AGC-7 1/2	7 1/2	.37
AGC-3/10	3/10	.68	AGC-8	8	.37
AGC-3/8	3/8	.68	AGC-9	9	.37
AGC-9/10	9/10	.68	AGC-10	10	.37
AGC-4 1/100	4 1/100	.68	AGC-12	12	.37
AGC-1/2	1/2	.48	AGC-14	14	.37
AGC-9/10	9/10	.48	AGC-15	15	.37
AGC-3/4	3/4	.48	AGC-20	20	.37
AGC-9/10	9/10	.37	AGC-25	25	.37
AGC-1	1	.37	AGC-30	30	.37
AGC-1 1/4	1 1/4	.37	AGC-35	35	.37
AGC-1 1/2	1 1/2	.37	AGC-40	40	.37
AGC-1 3/4	1 3/4	.37	AGC-50	50	.37
AGC-1 3/4	1 3/4	.37			

MDV SPIRAL WOUND FUSES


Same specs as type MDL, with axial leads (1 1/4" 20 gauge) Ctn. qty. 5. Volts: 250.

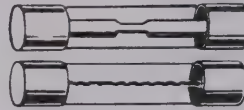
Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
MDV-1/200	1/200	\$7.38	MDV-3/4	3/4	\$1.76
MDV-1/64	1/64	7.38	MDV-1	1	1.76
MDV-1/16	1/16	3.43	MDV-1 1/4	1 1/4	1.58
MDV-1/10	1/10	3.43	MDV-1 1/2	1 1/2	1.76
MDV-1/8	1/8	3.61	MDV-1 1/10	1 1/10	1.58
MDV-1 1/1000	1 1/1000	3.43	MDV-2	2	1.79
MDV-3/16	3/16	3.43	MDV-2 1/2	2 1/2	1.79
MDV-3/10	3/10	3.43	MDV-3	3	1.79
MDV-1/4	1/4	2.19	MDV-3 3/10	3 3/10	1.61
MDV-3/10	3/10	2.19	MDV-3 1/2	3 1/2	1.61
MDV-3/8	3/8	2.19	MDV-4	4	1.76
MDV-9/10	9/10	2.19	MDV-5	5	1.76
MDV-1/2	1/2	1.76	MDV-7	7	1.61
MDV-9/10	9/10	1.58	MDV-8	8	1.61

MDA TIME DELAY 1/4" x 1 1/4"


High performing ceramic body. UL listed, CSA certified. Ctn. qty. 5. Volts: 250-1/32-20; 125-25-30.

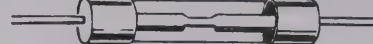
Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
MDA-1/32	1/32	\$4.67	MDA-2	2	\$2.24
MDA-1/10	1/10	4.67	MDA-2 1/2	2 1/2	1.96
MDA-1/8	1/8	4.67	MDA-2 1/10	2 1/10	2.22
MDA-1 1/100	1 1/100	4.67	MDA-3	3	1.68
MDA-3/10	3/10	4.67	MDA-3 3/10	3 3/10	2.25
MDA-1/4	1/4	2.97	MDA-4	4	1.68
MDA-3/10	3/10	2.26	MDA-5	5	1.68
MDA-3/8	3/8	2.76	MDA-6	6	2.25
MDA-9/10	9/10	2.76	MDA-6 1/4	6 1/4	2.25
MDA-1/2	1/2	3.04	MDA-7	7	2.25
MDA-9/10	9/10	2.97	MDA-8	8	1.68
MDA-3/4	3/4	2.76	MDA-10	10	1.68
MDA-9/10	9/10	2.76	MDA-12	12	1.68
MDA-1	1	2.24	MDA-15	15	1.68
MDA-1 1/4	1 1/4	3.04	MDA-20	20	1.68
MDA-1 1/2	1 1/2	3.04	MDA-25	25	2.25
MDA-1 1/10	1 1/10	2.70	MDA-30	30	1.68

1/4" x 1 1/4" Fuses

MDL TIME DELAY 1/4" x 1 1/4"


Spiral wound or dual element construction. Provides several seconds of time delay at 200% overloads. UL listed, CSA certified. Ctn. qty. 5. Volts: 250V-1/16-8; 32 Volt-9-30.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
MDL-1/100	1/100	\$2.28	MDL-1 1/10	1 1/10	\$.94
MDL-1/32	1/32	2.28	MDL-2	2	.94
MDL-1/16	1/16	1.80	MDL-2 1/4	2 1/4	.94
MDL-1/10	1/10	1.80	MDL-2 1/2	2 1/2	.94
MDL-1/8	1/8	1.80	MDL-2 1/10	2 1/10	.94
MDL-1 1/100	1 1/100	1.80	MDL-3	3	.94
MDL-1 1/1000	1 1/1000	1.80	MDL-3 3/10	3 3/10	.94
MDL-3/16	3/16	1.80	MDL-3 1/2	3 1/2	.94
MDL-2 1/10	2 1/10	1.80	MDL-4	4	.94
MDL-1/4	1/4	1.16	MDL-5	5	.94
MDL-3/10	3/10	1.16	MDL-6	6	.94
MDL-3/8	3/8	1.16	MDL-6 1/4	6 1/4	.94
MDL-9/10	9/10	1.16	MDL-7	7	.94
MDL-1/2	1/2	1.05	MDL-7 1/2	7 1/2	.94
MDL-9/10	9/10	1.05	MDL-8	8	.94
MDL-7/10	7/10	1.05	MDL-9	9	1.25
MDL-3/4	3/4	1.05	MDL-10	10	1.25
MDL-9/10	9/10	1.05	MDL-12	12	1.25
MDL-1	1	1.05	MDL-15	15	1.25
MDL-1 1/10	1 1/10	.94	MDL-20	20	1.25
MDL-1 1/4	1 1/4	.94	MDL-25	25	1.25
MDL-1 1/2	1 1/2	.94	MDL-30	30	1.25
MDL-1 1/10	1 1/10	.94			

GJV FAST-ACTING 1/4" x 1 1/4"


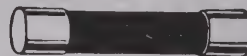
Same specs as type AGC, with axial leads (1 1/4" 20 gauge). Ctn. qty. 5. Volts: 250.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
GJV-1/32	1/32	\$6.37	GJV-1 1/10	1 1/10	\$1.43
GJV-1/16	1/16	2.64	GJV-1 1/4	1 1/4	1.43
GJV-1/8	1/8	2.64	GJV-2	2	1.43
GJV-3/10	3/10	2.64	GJV-2 1/2	2 1/2	1.43
GJV-1/4	1/4	1.76	GJV-3	3	1.43
GJV-3/10	3/10	1.76	GJV-3 1/10	3 1/10	1.52
GJV-3/8	3/8	1.76	GJV-4	4	1.52
GJV-1/2	1/2	1.76	GJV-5	5	1.52
GJV-9/10	9/10	1.76	GJV-6	6	1.52
GJV-3/4	3/4	1.76	GJV-7	7	1.52
GJV-1	1	1.43	GJV-8	8	1.52
GJV-1 1/4	1 1/4	1.43	GJV-10	10	1.52
GJV-1 1/2	1 1/2	1.43			

ABC FAST-ACTING 1/4" x 1 1/4"


High performing ceramic body. 10,000 amps. at 125V. Carry 110%. open at 135% within 1 hour. UL listed. CSA certified. Ctn. qty. 5. Volts: 250-14-20; 125V-25-30.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
ABC-1/4	1/4	\$.92	ABC-6	6	\$.83
ABC-1/2	1/2	.92	ABC-7	7	.83
ABC-3/4	3/4	.92	ABC-8	8	.83
ABC-1	1	.92	ABC-9	9	.83
ABC-1 1/2	1 1/2	.92	ABC-10	10	.83
ABC-2	2	.92	ABC-12	12	.83
ABC-2 1/2	2 1/2	.92	ABC-15	15	.83
ABC-3	3	.92	ABC-20	20	1.34
ABC-4	4	.92	ABC-25	25	1.34
ABC-5	5	.83	ABC-30	30	1.34

GBB VERY FAST-ACTING


Fast acting fuse designed to protect semi-conductor rectifiers. SCR's, thyristors. Low level of let thru. Ctn. qty. 5. Volts: 60.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
GBB-1/4	1/4	\$5.89	GBB-8	8	\$6.59
GBB-1	1	6.59	GBB-9	9	5.89
GBB-1 1/4	1 1/4	5.89	GBB-10*	10	5.01
GBB-2*	2	5.87	GBB-12	12	5.89
GBB-3*	3	6.59	GBB-15	15	5.75
GBB-4	4	6.13	GBB-20	20	6.13
GBB-5	5	5.87	GBB-25	25	5.89
GBB-6	6	6.59	GBB-30	30	6.13
GBB-7	7	6.13			

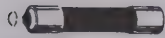
*250 VAC



Bussmann

1/4" × 1 1/4" and 5 × 20mm Fuses

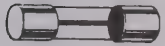
GBA INDICATING FUSE 1/4" × 1 1/4"



Pin indicates when fuse is open. Fast Acting, 125 volts UL listed and CSA certified. Ctn. qty. 5

Buss No.	Amp	Price Each Fuse	Buss No.	Amp	Price Each Fuse
GBA-1/2	1/2	\$5.98	GBA-4	4	\$5.68
GBA-3/4	3/4	5.92	GBA-5	5	6.37
GBA-1	1	6.37	GBA-8	8	7.47
GBA-1 1/2	1 1/2	5.68	GBA-10	10	7.80
GBA-2	2	6.37	GBA-15	15	7.80
GBA-3	3	6.37			

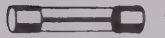
AGX FAST-ACTING FUSES 1/4" × 1"



Provide high speed action necessary to protect sensitive instruments or delicate apparatus. U.L. listed, CSA certified through 2 Amps. Size: 1/4" × 1". Shpg. wt. .76 lbs. per 100. Ctn. qty. 5.

Buss No.	Amp	Price Each Fuse	Buss No.	Amp	Price Each Fuse
AGX-1/200	1/200	\$7.53	AGX-1 1/2	1 1/2	\$0.76
AGX-1/100	1/100	7.25	AGX-2	2	.56
AGX-1/50	1/50	7.25	AGX-2 1/2	2 1/2	.76
AGX-1/25	1/25	1.93	AGX-3	3	.76
AGX-1/10	1/10	1.97	AGX-4	4	.76
AGX-1/5	1/5	1.47	AGX-5	5	.61
AGX-1/2	1/2	2.00	AGX-6	6	.61
AGX-1/1	1/1	2.00	AGX-7	7	.61
AGX-3/4	3/4	1.12	AGX-8	8	.61
AGX-1/2	1/2	1.12	AGX-10	10	.61
AGX-3/5	3/5	1.12	AGX-15	15	.61
AGX-1/10	1/10	1.12	AGX-20	20	.46
AGX-1/2	1/2	1.12	AGX-25	25	.61
AGX-3/4	3/4	1.12	AGX-30	30	.61
AGX-1	1	.76	AGX-35	35	.76
AGX-1 1/4	1 1/4	.76	AGX-50	50	.76

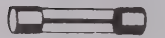
GMA FAST-ACTING 5 × 20mm



Compact high interrupting capacity fuse. UL listed, CSA certified through 5 amps. UL recognized Volts: 250-63mA-3A; 125V-3.15A-15A. Ctn. qty. 5.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
GMA-63mA	63mA	\$1.25	GMA-1A	1	\$0.75
GMA-100mA	100mA	1.25	GMA-1.5A	1.5	.75
GMA-125mA	125mA	1.25	GMA-1.6A	1.6	.75
GMA-150mA	150mA	.75	GMA-2A	2	.75
GMA-200mA	200mA	.75	GMA-2.5A	2.5	.75
GMA-250mA	250mA	.75	GMA-3A	3	.75
GMA-300mA	300mA	.75	GMA-3.15A	3.15	.75
GMA-315mA	315mA	.75	GMA-3.5A	3.5	.75
GMA-400mA	400mA	.75	GMA-4A	4	.75
GMA-500mA	500mA	.75	GMA-5A	5	.75
GMA-600mA	600mA	.75	GMA-6A	6	.75
GMA-630mA	630mA	.75	GMA-7A	7	.75
GMA-750mA	750mA	.75	GMA-8A	8	.75
GMA-800mA	800mA	.75	GMA-10A	10	.75

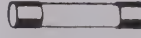
GMC TIME-DELAY 5 × 20mm



Compact high interrupting capacity fuse. UL recognized and CSA certified through 15 amps. Ctn. qty. 5. Volts: 250V-63mA-3A; 125V-3.15A-10A.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
GMC-63mA	63mA	\$2.01	GMC-1A	1	\$1.21
GMC-100mA	100mA	1.90	GMC-1.5A	1.5	1.21
GMC-125mA	125mA	1.90	GMC-1.6A	1.6	1.21
GMC-150mA	150mA	1.90	GMC-2A	2	1.21
GMC-200mA	200mA	1.90	GMC-2.5A	2.5	1.21
GMC-250mA	250mA	1.90	GMC-3A	3	1.21
GMC-300mA	300mA	1.90	GMC-3.15A	3.15	1.21
GMC-315mA	315mA	1.90	GMC-3.5A	3.5	1.21
GMC-400mA	400mA	1.90	GMC-4A	4	1.21
GMC-500mA	500mA	1.21	GMC-5A	5	1.21
GMC-600mA	600mA	1.21	GMC-6A	6	1.21
GMC-630mA	630mA	1.21	GMC-7A	7	1.21
GMC-750mA	750mA	1.21	GMC-8A	8	1.21
GMC-800mA	800mA	1.21	GMC-10A	10	1.21

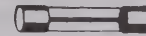
EUROPEAN STANDARD 5 × 20mm



250 volt fuses for foreign equipment. Designed to meet IEC specification 127. Ctn. qty. 5.

GDA Quick-Acting High Interrupting Rating

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
GDA-50mA	50mA	\$2.25	GDA-630mA	630mA	\$2.05
GDA-63mA	63mA	2.25	GDA-800mA	800mA	2.05
GDA-80mA	80mA	2.25	GDA-1	1	2.05
GDA-100mA	100mA	2.25	GDA-1.25	1.25	2.05
GDA-125mA	125mA	2.25	GDA-1.6	1.6	2.05
GDA-160mA	160mA	2.25	GDA-2	2	2.05
GDA-200mA	200mA	2.25	GDA-2.5	2.5	2.05
GDA-250mA	250mA	2.25	GDA-3.15	3.15	2.05
GDA-315mA	315mA	2.25	GDA-4	4	2.05
GDA-400mA	400mA	2.25	GDA-5	5	2.05
GDA-500mA	500mA	2.05	GDA-6.3	6.3	2.05



GDB Quick-Acting Low Interrupting Rating

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
GDB-32mA	32mA	\$2.69	GDB-630mA	630mA	\$1.65
GDB-40mA	40mA	2.69	GDB-800mA	800mA	1.65
GDB-50mA	50mA	2.69	GDB-1A	1	1.65
GDB-63mA	63mA	2.69	GDB-1.25A	1.25	1.65
GDB-80mA	80mA	2.69	GDB-1.6A	1.6	1.65
GDB-100mA	100mA	2.69	GDB-2A	2	1.65
GDB-125mA	125mA	1.99	GDB-2.5A	2.5	1.65
GDB-160mA	160mA	1.99	GDB-3.15A	3.15	1.65
GDB-200mA	200mA	1.99	GDB-4A	4	1.65
GDB-250mA	250mA	1.99	GDB-5A	5	1.65
GDB-315mA	315mA	1.99	GDB-6.3A	6.3	1.65
GDB-400mA	400mA	1.99	GDB-8A	8	1.65
GDB-500mA	500mA	1.65	GDB-10A	10	1.65



GDC Time-Lag

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
GDC-32mA	32mA	\$3.38	GDC-500mA	500mA	\$2.05
GDC-40mA	40mA	3.38	GDC-630mA	630mA	2.05
GDC-50mA	50mA	3.38	GDC-800mA	800mA	2.05
GDC-63mA	63mA	3.38	GDC-1A	1	2.05
GDC-80mA	80mA	3.38	GDC-1.25A	1.25	2.05
GDC-100mA	100mA	3.21	GDC-1.6A	1.6	2.05
GDC-125mA	125mA	3.38	GDC-2A	2	2.05
GDC-160mA	160mA	3.21	GDC-2.5A	2.5	2.05
GDC-200mA	200mA	3.21	GDC-3.15A	3.15	2.05
GDC-250mA	250mA	3.21	GDC-4A	4	2.05
GDC-315mA	315mA	3.21	GDC-5A	5	2.05
GDC-400mA	400mA	3.21	GDC-6.3A	6.3	2.05

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.

KTk-R FAST-ACTING $\frac{1}{32}$ " $\times$ $1\frac{1}{2}$ "



Limitron® Fast-Acting fuse. UL listed for branch circuit protection. Excellent short circuit protection. 600 volts or less, 200,000 ampere interrupting rating. Ctn. qty. 10.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
KTk-R- $\frac{1}{10}$	$\frac{1}{10}$	\$11.09	KTk-R- $\frac{3}{16}$	$\frac{3}{16}$	\$12.72
KTk-R- $\frac{1}{8}$	$\frac{1}{8}$	12.72	KTk-R-4	4	9.49
KTk-R- $\frac{3}{16}$	$\frac{3}{16}$	12.72	KTk-R-5	5	8.03
KTk-R- $\frac{1}{4}$	$\frac{1}{4}$	12.72	KTk-R-6	6	8.03
KTk-R- $\frac{3}{8}$	$\frac{3}{8}$	12.72	KTk-R-7	7	11.09
KTk-R- $\frac{1}{2}$	$\frac{1}{2}$	11.09	KTk-R-8	8	9.49
KTk-R- $\frac{3}{4}$	$\frac{3}{4}$	8.03	KTk-R-9	9	12.72
KTk-R-1	1	11.09	KTk-R-10	10	8.03
KTk-R- $\frac{1}{2}$	$\frac{1}{2}$	8.03	KTk-R-12	12	9.49
KTk-R-1	1	8.03	KTk-R-15	15	8.03
KTk-R- $\frac{1}{2}$	$\frac{1}{2}$	8.03	KTk-R-20	20	8.03
KTk-R-2	2	11.09	KTk-R-25	25	9.49
KTk-R- $\frac{1}{2}$	$\frac{1}{2}$	11.09	KTk-R-30	30	8.03

CC-TRON® (FNQ-R) TIME-DELAY REJECTION FUSES



Designed to protect control transformers and motor branch circuits. Time delay with built in rejection feature. Designed to UL 508 and NEC 430-72. 600 volts AC or less, 200,000 ampere interrupting rating. Ctn. qty. 10.

FNQ-R- $\frac{1}{4}$	$\frac{1}{4}$	\$12.89	FNQ-R-2	2	\$11.06
FNQ-R- $\frac{3}{16}$	$\frac{3}{16}$	14.81	FNQ-R- $\frac{2}{16}$	$\frac{2}{16}$	14.81
FNQ-R- $\frac{1}{8}$	$\frac{1}{8}$	14.81	FNQ-R- $\frac{2}{16}$	$\frac{2}{16}$	12.89
FNQ-R- $\frac{1}{2}$	$\frac{1}{2}$	11.06	FNQ-R- $\frac{2}{16}$	$\frac{2}{16}$	14.81
FNQ-R- $\frac{3}{8}$	$\frac{3}{8}$	14.81	FNQ-R-3	3	11.06
FNQ-R- $\frac{1}{2}$	$\frac{1}{2}$	11.06	FNQ-R- $\frac{3}{16}$	$\frac{3}{16}$	14.81
FNQ-R- $\frac{3}{4}$	$\frac{3}{4}$	14.81	FNQ-R- $\frac{3}{16}$	$\frac{3}{16}$	14.81
FNQ-R-1	1	9.35	FNQ-R- $\frac{3}{16}$	$\frac{3}{16}$	14.81
FNQ-R- $\frac{1}{16}$	$\frac{1}{16}$	14.81	FNQ-R-4	4	12.89
FNQ-R- $\frac{1}{16}$	$\frac{1}{16}$	14.81	FNQ-R-5	5	11.06
FNQ-R- $\frac{1}{16}$	$\frac{1}{16}$	14.81	FNQ-R-6	6	12.89
FNQ-R- $\frac{1}{16}$	$\frac{1}{16}$	14.81	FNQ-R- $\frac{6}{16}$	$\frac{6}{16}$	14.81
FNQ-R- $\frac{1}{16}$	$\frac{1}{16}$	14.81	FNQ-R- $\frac{7}{16}$	$\frac{7}{16}$	12.89
FNQ-R- $\frac{1}{16}$	$\frac{1}{16}$	11.06	FNQ-R-8	8	12.89
FNQ-R- $\frac{1}{16}$	$\frac{1}{16}$	14.81	FNQ-R-9	9	12.89
FNQ-R- $\frac{1}{16}$	$\frac{1}{16}$	14.81	FNQ-R-10	10	12.89

KTk FAST-ACTING $\frac{1}{32}$ " $\times$ $1\frac{1}{2}$ "



Limitron® Fast Acting fuse. UL listed. CSA certified. 600 volt AC, 200,000 A/C. Ctn. qty. 10.

KTk- $\frac{1}{10}$	$\frac{1}{10}$	\$10.10	KTk-5	5	\$ 7.31
KTk- $\frac{1}{8}$	$\frac{1}{8}$	11.54	KTk-6	6	7.31
KTk- $\frac{3}{16}$	$\frac{3}{16}$	11.54	KTk-7	7	10.10
KTk- $\frac{1}{4}$	$\frac{1}{4}$	8.62	KTk- $\frac{7}{16}$	$\frac{7}{16}$	11.54
KTk- $\frac{3}{8}$	$\frac{3}{8}$	11.54	KTk-8	8	7.31
KTk- $\frac{1}{2}$	$\frac{1}{2}$	11.54	KTk-9	9	11.54
KTk- $\frac{3}{4}$	$\frac{3}{4}$	7.31	KTk-10	10	7.31
KTk-1	1	11.54	KTk-12	12	10.07
KTk- $\frac{1}{16}$	$\frac{1}{16}$	10.10	KTk-15	15	7.31
KTk- $\frac{1}{16}$	$\frac{1}{16}$	7.31	KTk-20	20	7.57
KTk- $\frac{1}{16}$	$\frac{1}{16}$	11.54	KTk-25	25	7.57
KTk- $\frac{1}{16}$	$\frac{1}{16}$	8.62	KTk-30	30	7.57
KTk-2	2	7.31	KTk-35	35	10.43
KTk- $\frac{1}{2}$	$\frac{1}{2}$	10.10	KTk-40	40	8.93
KTk-3	3	7.31	KTk-45	45	11.99
KTk- $\frac{3}{16}$	$\frac{3}{16}$	11.54	KTk-50	50	10.43
KTk-4	4	7.31			

BBS $\frac{1}{32}$ " $\times$ $1\frac{1}{8}$ "



Fast-Acting. Replacement for many multi-meter fuses. 600 volts. UL listed. CSA certified. Ctn. qty. 10.

BBS- $\frac{1}{10}$	$\frac{1}{10}$	\$4.74	BBS-2	2	\$3.56
BBS- $\frac{3}{16}$	$\frac{3}{16}$	4.74	BBS-3	3	3.56
BBS- $\frac{1}{4}$	$\frac{1}{4}$	4.74	BBS-4	4	3.56
BBS- $\frac{3}{8}$	$\frac{3}{8}$	4.74	BBS-5	5	3.56
BBS- $\frac{1}{2}$	$\frac{1}{2}$	4.74	BBS-6	6	4.74
BBS- $\frac{3}{4}$	$\frac{3}{4}$	4.74	BBS-7	7	4.74
BBS-1	1	4.74	BBS-8	8	4.74
BBS- $\frac{1}{16}$	$\frac{1}{16}$	3.01	BBS-10	10	4.12
BBS- $\frac{1}{16}$	$\frac{1}{16}$	4.74	BBS-15	15	4.74
BBS- $\frac{1}{16}$	$\frac{1}{16}$	4.74	BBS-20	20	4.74
BBS- $\frac{1}{16}$	$\frac{1}{16}$	4.74	BBS-25	25	4.74
BBS- $\frac{1}{16}$	$\frac{1}{16}$	4.74	BBS-30	30	4.74

Specialty Fuses

FNM DUAL-ELEMENT TIME DELAY $\frac{1}{32}$ " $\times$ $1\frac{1}{2}$ "



Dual elements, in single fiber tube, fuses avoid needless blows from starting currents or surges. Operates only on dangerous overloads, or short circuits. Fuse opening time is 4

hours (min.) @ 110% load; 1 hour (max.) at 135% load. UL listed. CSA certified. Ctn. qty. 10.

Buss No.	Amps	Volts	Price Each Fuse	Buss No.	Amps	Volts	Price Each Fuse
FNM- $\frac{1}{10}$	$\frac{1}{10}$	250	\$5.34	FNM-3	3	250	\$3.12
FNM- $\frac{1}{100}$	$\frac{1}{100}$	250	5.34	FNM- $\frac{3}{16}$	$\frac{3}{16}$	250	3.69
FNM- $\frac{3}{16}$	$\frac{3}{16}$	250	5.34	FNM- $\frac{3}{16}$	$\frac{3}{16}$	250	3.69
FNM- $\frac{1}{4}$	$\frac{1}{4}$	250	5.34	FNM-4	4	250	3.12
FNM- $\frac{3}{8}$	$\frac{3}{8}$	250	5.34	FNM- $\frac{4}{16}$	$\frac{4}{16}$	250	4.95
FNM- $\frac{1}{2}$	$\frac{1}{2}$	250	5.34	FNM-5	5	250	3.12
FNM- $\frac{1}{2}$	$\frac{1}{2}$	250	3.99	FNM- $\frac{5}{16}$	$\frac{5}{16}$	250	4.95
FNM- $\frac{3}{4}$	$\frac{3}{4}$	250	3.99	FNM-6	6	250	3.69
FNM- $\frac{3}{4}$	$\frac{3}{4}$	250	3.99	FNM- $\frac{6}{16}$	$\frac{6}{16}$	250	3.69
FNM-1	1	250	3.38	FNM-7	7	250	3.69
FNM- $\frac{1}{8}$	$\frac{1}{8}$	250	5.34	FNM-8	8	250	3.12
FNM- $\frac{1}{4}$	$\frac{1}{4}$	250	3.99	FNM-9	9	250	4.95
FNM- $\frac{1}{10}$	$\frac{1}{10}$	250	4.68	FNM-10	10	250	3.12
FNM- $\frac{1}{16}$	$\frac{1}{16}$	250	3.99	FNM-12	12	125	3.69
FNM- $\frac{1}{16}$	$\frac{1}{16}$	250	3.99	FNM-15	15	125	3.12
FNM- $\frac{1}{16}$	$\frac{1}{16}$	250	4.95	FNM-20	20	32	3.12
FNM-2	2	250	3.12	FNM-25	25	32	3.69
FNM- $\frac{2}{16}$	$\frac{2}{16}$	250	4.32	FNM-30	30	32	3.12
FNM- $\frac{2}{16}$	$\frac{2}{16}$	250	3.69	FNM-35	35	...	4.95
FNM- $\frac{2}{16}$	$\frac{2}{16}$	250	4.95	FNM-40	40	...	4.95

FNA PIN INDICATING FUSES

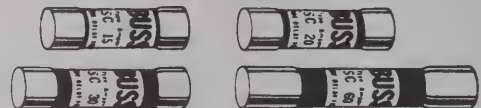


Dual-element slow blowing has silver indicating pin which extends from fuse when fuse opens. Carries 110% load indefinitely, opens at 135% in 1

hr. Can be used in Buss HPF-C indicating fuseholder or pin can be used to actuate a signal. UL listed. Size: $\frac{1}{32}$ " $\times$ $1\frac{1}{2}$ ". Ctn. qty. 10; FNA-12 to 30 Ctn. qty. 5.

FNA- $\frac{1}{10}$	$\frac{1}{10}$	250	\$ 8.99	FNA- $\frac{2}{16}$	$\frac{2}{16}$	125	\$ 8.74
FNA- $\frac{1}{8}$	$\frac{1}{8}$	250	8.99	FNA- $\frac{2}{16}$	$\frac{2}{16}$	125	10.02
FNA- $\frac{1}{100}$	$\frac{1}{100}$	250	8.99	FNA-3	3	125	7.48
FNA- $\frac{3}{16}$	$\frac{3}{16}$	250	7.86	FNA- $\frac{3}{16}$	$\frac{3}{16}$	125	10.02
FNA- $\frac{1}{4}$	$\frac{1}{4}$	250	8.99	FNA- $\frac{3}{16}$	$\frac{3}{16}$	125	10.02
FNA- $\frac{3}{8}$	$\frac{3}{8}$	250	8.99	FNA-4	4	125	8.74
FNA- $\frac{1}{2}$	$\frac{1}{2}$	250	8.99	FNA- $\frac{4}{16}$	$\frac{4}{16}$	125	10.02
FNA- $\frac{1}{2}$	$\frac{1}{2}$	250	6.71	FNA-5	5	125	6.32
FNA- $\frac{3}{4}$	$\frac{3}{4}$	250	7.86	FNA- $\frac{5}{16}$	$\frac{5}{16}$	125	10.02
FNA- $\frac{3}{4}$	$\frac{3}{4}$	250	8.99	FNA-6	6	125	8.74
FNA-1	1	125	5.71	FNA- $\frac{6}{16}$	$\frac{6}{16}$	125	10.02
FNA- $\frac{1}{16}$	$\frac{1}{16}$	125	6.71	FNA-7	7	125	8.74
FNA- $\frac{1}{16}$	$\frac{1}{16}$	125	7.86	FNA-8	8	125	8.74
FNA- $\frac{1}{16}$	$\frac{1}{16}$	125	8.99	FNA-9	9	125	10.02
FNA- $\frac{1}{16}$	$\frac{1}{16}$	125	8.99	FNA-10	10	125	6.32
FNA- $\frac{1}{16}$	$\frac{1}{16}$	125	7.86	FNA-12	12	125	10.02
FNA- $\frac{1}{16}$	$\frac{1}{16}$	125	6.71	FNA-15	15	125	8.74
FNA- $\frac{1}{16}$	$\frac{1}{16}$	125	7.86	FNA-20	20	32	10.02
FNA-2	2	125	6.32	FNA-25	25	32	10.02
FNA- $\frac{2}{16}$	$\frac{2}{16}$	125	10.02	FNA-30	30	32	10.02

SC FUSES



SC fuses above 6 amps have time delay feature @ 300 volts AC. Size rejecting feature prevents overfusing. Ctn. qty. 2

Buss No.	Amps	Size (in.)	Ctn. Qty.	Price Each Fuse
SC- $\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{32} \times \frac{1}{16}$	4	\$5.46
SC-1	1	$\frac{1}{32} \times \frac{1}{16}$	4	4.09
SC- $\frac{1}{16}$	$\frac{1}{16}$	$\frac{1}{32} \times \frac{1}{16}$	4	5.46
SC-2	2	$\frac{1}{32} \times \frac{1}{16}$	4	4.09
SC-3	3	$\frac{1}{32} \times \frac{1}{16}$	4	4.09
SC-4	4	$\frac{1}{32} \times \frac{1}{16}$	4	5.46
SC-5	5	$\frac{1}{32} \times \frac{1}{16}$	4	4.09
SC-6	6	$\frac{1}{32} \times \frac{1}{16}$	4	4.09
SC-8	8	$\frac{1}{32} \times \frac{1}{16}$	4	5.46
SC-10	10	$\frac{1}{32} \times \frac{1}{16}$	4	4.09
SC-15	15	$\frac{1}{32} \times \frac{1}{16}$	4	2.87
SC-20	20	$\frac{1}{32} \times \frac{1}{16}$	4	2.87
SC-25	25	$\frac{1}{32} \times \frac{1}{16}$	4	7.41
SC-30	30	$\frac{1}{32} \times \frac{1}{16}$	4	5.35
SC-35	35	$\frac{1}{32} \times \frac{1}{16}$	2	7.25
SC-40	40	$\frac{1}{32} \times \frac{1}{16}$	2	6.23
SC-45	45	$\frac{1}{32} \times \frac{1}{16}$	2	7.25
SC-50	50	$\frac{1}{32} \times \frac{1}{16}$	2	7.25
SC-60	60	$\frac{1}{32} \times \frac{1}{16}$	2	5.27

Bussmann

PC-TRON® PC BOARD FUSE

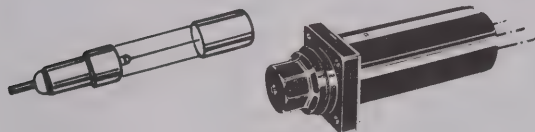


The PC-Tron® subminiature fuse offers high short circuit performance which until now could only be found in much larger glass tube fuses. Due to its unique construction the PC-Tron® limits the I²t (energy let-thru) to very low levels. 2" lead spacing. Auto insertable. Standard wave soldering technique will not affect performance. Optional socket available. Surface mount fuse version available. Long lead .75" or Short lead .10" length. Ctn. qty. 5.

Interrupting: 10,000 amperes @ 125VAC; 1/2-5 amps.
Rating: 50 amperes @ 250VAC; 1/2-3 amps.

Buss No.	Amps	Lead Length	Price Each Fuse	Buss No.	Amps	Lead Length	Price Each Fuse
PCB-1/2	1/2	.75"	\$2.91	PCC-1	1	.10"	\$2.91
PCB-3/4	3/4	.75"	2.91	PCC-1 1/2	1 1/2	.10"	2.91
PCB-1	1	.75"	2.91	PCC-2	2	.10"	2.91
PCB-1 1/2	1 1/2	.75"	2.91	PCC-2 1/2	2 1/2	.10"	2.91
PCB-2	2	.75"	2.91	PCC-3	3	.10"	2.91
PCB-2 1/2	2 1/2	.75"	2.91	PCC-5	5	.75"	2.91
PCC-1/2	1/2	.10"	2.97	PCE-5	5	.10"	2.91
PCC-3/4	3/4	.10"	2.91				
PCH-1/2	1/2	Surface	\$4.04	PCH-2	2	Surface	\$4.04
PCH-1	1	Mout	4.04	PCH-3	3	Mount	4.04
PCH-1 1/2	1 1/2		4.04	PCI-5	5		4.04

TYPE 70 SERIES TELECOMMUNICATIONS FUSE

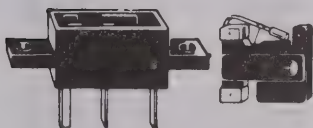


15087

Pin indicating and "fuse-open" alarm circuit activation. Color coded flag. Fuse fits in 300 volts 15087 Holder. Ctn. qty. 10.

Buss No.	Amps	Color Code	Price Each Fuse	Buss No.	Amps	Color Code	Price Each Fuse
70P-1/10A	1/10	Gray & Wh	\$6.56	70A-1 1/2A	1 1/2	Wh	\$ 3.87
70R-1 1/100A	1 1/100	Red & Wh	6.56	70B-2A	2	Orn	4.51
70E-1 1/100A	1 1/100	Yel	6.56	70G-3A	3	Blu	4.51
70X-3/10A	3/10	Blk	6.56	70J-3 1/2A	3 1/2	Blk & Wh	
70F-1/4A	1/4	Vio	4.57	70D-5A	5	Grn	4.57
70K-1/4A	1/4	Vio & Wh	5.73	70M-8A	8	Brn & Wh	5.71
70G-1/2A	1/2	Red	4.51	70N-10A	10	Vio & Yel	4.51
70H-3/4A	3/4	Brn	5.25	15087	.....	.....	14.37
70L-1A	1	Blue & Wh	5.73				

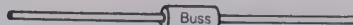
GMT TELECOMMUNICATION FUSE



For multiple panel mounting in small spaces. Color-coded, spring loaded flag indicates amp rating, performing visual indication when alarm circuit activates. Opening time @ 100% load is 10 min.; @ 150% load, 5 mins. (max.). Amp ratings are 125VAC, or 60VDC. Size: 1/4" x 1 1/2". HLT holder fits all GMT fuses. Ctn. qty. 10.

Buss No.	Amps	Color Code	Price Each Fuse	Buss No.	Amps	Color Code	Price Each Fuse
GMT-1 1/100	1 1/100	Yel	\$2.88	GMT-2	2	Orn	\$2.52
GMT-1/4	1/4	Vio	2.52	GMT-3	3	Blu	2.52
GMT-1/2	1/2	Red	2.52	GMT-3 1/4	3 1/4	Wh & Blu	3.28
GMT-65/100	65/100	Blk	3.28	GMT-4	4	Wh & Brn	3.28
GMT-3/4	3/4	Brn	2.88	GMT-5	5	Grn	2.52
GMT-1	1	Gray	2.88	GMT-7 1/2	7 1/2	Blk & Wh	2.88
GMT-1 1/2	1 1/2	Wh	2.52	GMT-10	10	Red & Wh	2.88
GMT-1 1/2	1 1/2	Wh & Yel	3.28	HLT	.....	.....	2.90

MICROTRON® FUSE



The MICROTRON® subminiature fuse is designed to safely interrupt 50 amperes at 125 VAC, at power factors as low as 97%. In addition, the MICROTRON® is capable of interrupting a 300 ampere fault at 125 VDC. 7 and 10 amp devices rated at 60 volts. The 0.295" x 0.120" diameter plastic body fits the same mounting footprint as existing subminiature fuses (.4" centerline-to-centerline holes). The high temperature body material will not discolor after prolonged periods of operation near or at rated current, which means the body marking will remain legible. Ctn. qty. 10.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
MCR-1 1/16	1/16	\$2.43	MCR-2	2	\$1.88
MCR-1/4	1/4	2.43	MCR-2 1/2	2 1/2	1.88
MCR-1/2	1/2	2.43	MCR-3	3	1.88
MCR-3/4	3/4	2.43	MCR-3 1/2	3 1/2	1.88
MCR-1	1	2.43	MCR-4	4	1.88
MCR-1 1/2	1 1/2	1.88	MCR-5	5	1.88
			MCR-7A	7	1.88
			MCR-10A	10	1.88

GMW PIN-BASE



Fuse size .270 x .250 inches. Carry 100%, open at 200% within 10 sec. or less. Interrupting rating—35 amps at 125 volts. HWA holder order separately. AF knob for fuseholder makes holder waterproof. UL recognized. Ctn. qty. 10.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
GMW-1/100	1/100	\$8.59	GMW-1/2	1/2	\$5.34
GMW-1/64	1/64	8.59	GMW-3/4	3/4	5.34
GMW-1/32	1/32	8.59	GMW-1	1	5.34
GMW-1/16	1/16	6.98	GMW-1 1/2	1 1/2	5.34
GMW-1/10	1/10	5.34	GMW-2	2	5.34
GMW-1/8	1/8	5.34	GMW-3	3	5.34
GMW-1/4	1/4	5.34	GMW-4	4	5.34
GMW-3/10	3/10	4.68	GMW-5	5	5.34
GMW-1/2	1/2	5.34	HWA-AF	.....	6.56
			HWA	.....	6.13

GLR FUSE AND FUSE HOLDER KNOB



Fuse holder panel mounts or can be used in line. UL recog. 15A @ 300V. Safeguard against use of wrong type fuse. Current ratings for fuses are @ 300 volts. Ctn. qty. 5.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
GLR-1/2	1/2	\$3.02	GLR-6	6	\$1.65
GLR-1	1	1.45	GLR-7	7	1.65
GLR-1 1/2	1 1/2	1.45	GLR-8	8	1.65
GLR-1 1/4	1 1/4	1.65	GLR-9	9	1.65
GLR-2	2	1.45	GLR-10	10	1.62
GLR-2 1/2	2 1/2	1.65	GLR-12	12	2.00
GLR-3	3	1.45	GLR-15	15	2.00
GLR-4	4	1.45	HLR	.....	1.63
GLR-5	5	1.45			

**WE CARRY MOST
MAJOR BRANDS. IF YOU CAN'T FIND WHAT YOU WANT,
CALL US FOR INFORMATION.**

TRON RECTIFIER FUSES



TRON[®] Rectifier Fuses are especially designed for the protection of semiconductor rectifiers, SCR's, thyristors, solid state devices or any instance in which a very fast acting fuse is needed. They provide extremely fast opening on overload and fault currents, with a high degree of restriction of the let-thru current. If each diode is protected by a TRON rectifier fuse, the fuse will open very quickly when the current drawn exceeds the rating of the diode. Thus when a short-circuit occurs in a diode the fuse opens and takes that diode out of the circuit; other good diodes in the rectifier which might otherwise be damaged are not affected. For application data, see Bulletin TRFS and E60.

Ampere and Voltage Ratings—Rectifier Fuses

60 Volts				130 Volts		250 Volts		500 Volts	600 Volts			700 Volts
GBB	KAA	KAW	KAH	KAB	KAX	KBH	KAC	KBC	KAJ	KBP		
*GBB-1/4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	*KAA-1/2	.....	.....	KAB-1/2	KAX-1/2	.....	.....	.....	.....	.....	.....	.....
*GBB-1	*KAA-1	KAW-1	.....	KAB-1	KAX-1	.....	KAC-1	KBC-1	.....	.....	.....	.....
*GBB-1 1/4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	*KAA-1 1/2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
*GBB-2	*KAA-2	KAW-2	.....	KAB-2	KAX-2	.....	KAC-2	KBC-2	.....	.....	.....	.....
*GBB-3	*KAA-3	KAW-3	.....	KAB-3	KAX-3	.....	KAC-3	KBC-3	.....	.....	.....	.....
*GBB-4	*KAA-4	KAW-4	.....	KAB-4	KAX-4	.....	KAC-4	KBC-4	.....	.....	.....	.....
*GBB-5	*KAA-5	KAW-5	.....	KAB-5	KAX-5	.....	KAC-5	KBC-5	.....	.....	.....	.....
*GBB-6	*KAA-6	KAW-6	.....	KAB-6	KAX-6	.....	KAC-6	KBC-6	.....	.....	.....	.....
*GBB-7	*KAA-7	KAW-7	.....	KAB-7	KAX-7	.....	KAC-7	KBC-7	.....	.....	.....	.....
*GBB-8	*KAA-8	KAW-8	.....	KAB-8	KAX-8	.....	KAC-8	KBC-8	.....	.....	.....	.....
*GBB-9	*KAA-9	KAW-9	.....	KAB-9	.....	.....	.....	.....	.....	.....	.....	.....
*GBB-10	*KAA-10	KAW-10	.....	KAB-10	KAX-10	.....	KAC-10	KBC-10	.....	.....	.....	.....
*GBB-12	*KAA-12	KAW-12	.....	KAB-12	KAX-12	.....	KAC-12	KBC-12	.....	.....	.....	.....
*GBB-15	*KAA-15	.....	.....	KAB-15	KAX-15	.....	KAC-15	KBC-15	.....	.....	.....	.....
.....	.....	.....	.....	KAB-17 1/2	KAX-17 1/2	.....	KAC-17 1/2	KBC-17 1/2	.....	.....	.....	.....
*GBB-20	*KAA-20	.....	.....	KAB-20	KAX-20	.....	KAC-20	KBC-20	.....	.....	.....	.....
*GBB-25	*KAA-25	.....	.....	KAB-25	KAX-25	.....	*KAC-25	KBC-25	KAJ-25	KBP-25	.....	.....
*GBB-30	*KAA-30	.....	.....	KAB-30	KAX-30	.....	*KAC-30	KBC-30	.....	KBP-30	.....	.....
.....	.....	.....	*KAH-35	*KAB-35	KAX-35	*KBH-35	*KAC-35	*KBC-35	KAJ-35	KBP-35	.....	.....
.....	.....	.....	*KAH-40	*KAB-40	*KAX-40	*KBH-40	*KAC-40	*KBC-40	KAJ-40	KBP-40	.....	.....
.....	.....	.....	KAH-45	KAB-45	KAX-45	KBH-45	KAC-45	*KBC-45	KAJ-45	.....	.....	.....
.....	.....	.....	*KAH-50	*KAB-50	*KAX-50	*KBH-50	*KAC-50	*KBC-50	KAJ-50	KBP-50	.....	.....
.....	.....	.....	*KAH-60	*KAB-60	*KAX-60	*KBH-60	*KAC-60	*KBC-60	KAJ-60	KBP-60	.....	.....
.....	*KAA-70	.....	.....	*KAB-70	KAX-70	*KBH-70	*KAC-70	*KBC-70	.....	KBP-70	.....	.....
.....	*KAA-80	.....	.....	*KAB-80	KAX-80	*KBH-80	*KAC-80	*KBC-80	.....	KBP-80	.....	.....
.....	*KAA-90	.....	.....	*KAB-90	KAX-90	*KBH-90	*KAC-90	*KBC-90	.....	KBP-90	.....	.....
.....	*KAA-100	.....	.....	*KAB-100	KAX-100	*KBH-100	*KAC-100	*KBC-100	.....	KBP-100	.....	.....
.....	.....	.....	.....	.....	.....	.....	*KAC-110	*KBC-110	.....	.....	.....	.....
.....	*KAA-125	.....	.....	*KAB-125	KAX-125	*KBH-125	*KAC-125	*KBC-125	.....	KBP-125	.....	.....
.....	*KAA-130	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	*KAA-150	.....	.....	*KAB-150	KAX-150	*KBH-150	*KAC-150	*KBC-150	.....	KBP-150	.....	.....
.....	.....	.....	.....	*KAB-175	KAX-175	*KBH-175	*KAC-175	*KBC-175	.....	KBP-175	.....	.....
.....	*KAA-200	.....	.....	*KAB-200	KAX-200	*KBH-200	*KAC-200	*KBC-200	.....	KBP-200	.....	.....
.....	*KAA-225	.....	.....	*KAB-225	*KAX-225	*KBH-225	*KAC-225	*KBC-225	.....	KBP-225	.....	.....
.....	*KAA-250	.....	.....	*KAB-250	*KAX-250	*KBH-250	*KAC-250	*KBC-250	.....	KBP-250	.....	.....
.....	*KAA-300	.....	.....	*KAB-300	*KAX-300	*KBH-300	*KAC-300	*KBC-300	.....	KBP-300	.....	.....
.....	*KAA-350	.....	.....	*KAB-350	*KAX-350	*KBH-350	*KAC-350	*KBC-350	.....	.....	.....	.....
.....	*KAA-400	.....	.....	*KAB-400	*KAX-400	*KBH-400	*KAC-400	*KBC-400	.....	KBP-400	.....	.....
.....	*KAA-450	.....	.....	*KAB-450	.....	*KBH-450	*KAC-450	*KBC-450	.....	KBP-450	.....	.....
.....	*KAA-500	.....	.....	*KAB-500	*KAX-500	*KBH-500	*KAC-500	*KBC-500	.....	KBP-500	.....	.....
.....	.....	.....	.....	.....	.....	*KBH-550	.....	.....	.....	.....	.....	.....
.....	*KAA-600	.....	.....	*KAB-600	*KAX-600	*KBH-600	*KAC-600	*KBC-600	.....	KBP-600	.....	.....
.....	*KAA-650	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	*KAB-700	*KAX-700	.....	*KAC-700	.....	.....	.....	.....	.....
.....	KAA-800	.....	.....	KAB-800	KAX-800	KBH-800	KAC-800	KBC-800	.....	.....	.....	.....
.....	*KAA-1000	.....	.....	.....	.....	*KBH-1000	*KAC-1000	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	KBH-1200	.....	.....	.....	.....	.....	.....

*UL Recognized.



Military Fuses and Holders

Bussmann

SUFFIX S ON MILITARY DESIGNATION;
E.G., F01A250V1/500A-S INDICATES
SILVER PLATING. IF NOT REQUIRED,
OMIT; E.G., F01A250V1/500A.

Military Type Designation	Nearest BUSS Equiv.
F01A250V1/200A-S	AGX1/200
F01A250V1/100A-S	AGX1/100
F01A250V1/32A-S	AGX1/32
F01A250V1/16A-S	AGX1/16
F01A250V1/8A-S	AGX1/8
F01A250V1/4A-S	AGX1/4
F01A250V3/8A-S	AGX3/8
F01A250V1/2A-S	AGX1/2
F01A125V3/4A-S	AGX3/4
F01A125V1A-S	AGX1
F01A125V11/2A-S	AGX11/2
F01A125V2A-S	AGX2
F02A250V1/100A-S	AGC1/100
F02A250V1/32A-S	AGC1/32
F02A250V1/16A-S	AGC1/16
F02A250V1/8A-S	AGC1/8
F02A250V1/4A-S	AGC1/4
F02A250V3/8A-S	AGC3/8
F02A250V1/2A-S	AGC1/2
F02A250V3/4A-S	AGC3/4
F02A250V1A-S	AGC1
F02A250V11/2A-S	AGC11/2
F02A250V2A-S	AGC2
F02A250V3A-S	AGC3
F02A250V4A-S	MTH4
F02A250V5A-S	MTH5
F02A250V6A-S	MTH6
F02A32V15A-S	AGC15
F02A32V20A-S	AGC20
F02B250V1/100A-S	MDL1/100
F02B250V1/32A-S	MDL1/32
F02B250V1/16A-S	MDL1/16
F02B250V1/8A-S	MDL1/8
F02B250V1/4A-S	MDL1/4
F02B250V3/8A-S	MDL3/8
F02B250V1/2A-S	MDL1/2
F02B250V3/4A-S	MDL3/4
F02B250V1A-S	MDL1
F02B250V11/2A-S	MDX11/2
F02B250V2A-S	MDX2
F02B125V3A-S	MDX3
F02B125V5A-S	MDX5
F03A250V1A-S	ABC1
F03A250V3A-S	ABC3
F03A250V5A-S	ABC5
F03A250V8A-S	ABC8
F03A250V3A-S	ABC3
F03A250V10A-S	ABC10
F03A250V12A-S	ABC12
F03A250V15A-S	ABC15
F03A125V20A-S	ABC20
F03A125V30A-S	ABC30
F03B250V1/100A-S	MDA1/100
F03B250V1/32A-S	MDA1/32
F03B250V1/16A-S	MDA1/16
F03B250V1/8A-S	MDA1/8
F03B250V15/100A-S	MDA15/100
F03B250V3/16A-S	MDA3/16
F03B250V1/4A-S	MDA1/4
F03B250V3/8A-S	MDA3/8
F03B250V1/2A-S	MDA1/2
F03B250V3/4A-S	MDA3/4
F03B250V1A-S	MDA1
F03B125V3A-S	MDA3
F03B125V5A-S	MDA5
F03B125V8A-S	MDA8

Military Type Designation	Nearest BUSS Equiv.
F03B125V10A-S	MDA10
F03B125V15A-S	MDA15
F03B125V20A-S	MDA20
F03B125V30A-S	MDA30
F09A250V1A-S	BAN1
F09A250V3A-S	BAN3
F09A250V5A-S	BAN5
F09A250V6A-S	BAN6
F09A250V10A-S	BAN10
F09A250V15A-S	BAN15
F09A250V20A-S	BAN20
F09A250V25A-S	BAN25
F09A250V30A-S	BAN30
F09B250V2/10A-S	FNM2/10
F09B250V3/10A-S	FNM3/10
F09B250V4/10A-S	FNM4/10
F09B250V1/2A-S	FNM1/2
F09B250V6/10A-S	FNM6/10
F09B250V8/10A-S	FNM8/10
F09B250V1A-S	FNM1
F09B250V11/4A-S	FNM11/4
F09B250V1-6/10A-S	FNM1-6/10
F09B250V2A-S	FNM2
F09B250V21/2A-S	FNM21/2
F09B250V3-2/10A-S	FNM3-2/10
F09B250V4A-S	FNM4
F09B250V5A-S	FNM5
F09B250V61/4A-S	FNM61/4
F09B250V8A-S	FNM8
F09B250V10A-S	FNM10
F09B125V15A-S	FNM15
F09B32V20A-S	FNM20
F09B32V25A-S	FNM25
F09B32V30A-S	FNM30
F15A250V1A-S	NFA1
F15A250V3A-S	NFA3
F15A250V6A-S	NFA6
F15A250V10A-S	NFA10
F15A250V15A-S	NFA15
F15A250V20A-S	NFA20
F15A250V25A-S	NFA25
F15A250V30A-S	NFA30
F15B250V1A-S	FRN-R-1
F15B250V2A-S	FRN-R-2
F15B250V32/10A-S	FRN-R-32/10
F15B250V5A-S	FRN-R-5
F15B250V61/4A-S	FRN-R-61/4
F15B250V8A-S	FRN-R-8
F15B250V10A-S	FRN-R-10
F15B250V12A-S	FRN-R-12
F15B250V15A-S	FRN-R-15
F15B250V20A-S	FRN-R-20
F15B250V25A-S	FRN-R-25
F15B250V30A-S	FRN-R-30
F60C500V1/8A-S	KLM1/8
F60C500V1/4A-S	KLM1/4
F60C500V1/2A-S	KLM1/2
F60C500V3/4A-S	KLM3/4
F60C500V1A-S	KLM1
F60C500V3A-S	KLM3
F60C500V6A-S	KLM6
F60C500V8A-S	KLM8
F60C500V10A-S	KLM10
F60C500V15A-S	KLM15
F60C50020A-S	KLM20
F60C50025A-S	KLM25
F60C50030A-S	KLM30

FUSE CLIPS LISTED MIL-F-21346 DATED 24 APRIL 1958

Military Type Designation	Nearest BUSS Equiv.
F61C500V1A-S	KLC-1
F61C500V3A-S	KLC-3
F61C500V6A-S	KLC-6
F61C500V10A-S	KLC-10
F61C500V15A-S	KLC-15
F61C500V20A-S	KLC-20
F61C500V25A-S	KLC-25
F61C500V30A-S	KLC-30

INSTRUMENT TYPE FUSES LISTED UNDER MIL-F-23419A, DATED 19 DEC. 1966

Designation	BUSS Equivalent
FM01 1/16A	GMU 1/16A
FM01 1/10A	GMU 1/10A
FM01 1/8A	GMU 1/8A
FM01 2/10A	GMU 2/10A
FM01 1/4A	GMU 1/4A
FM01 3/10A	GMU 3/10A
FM01 4/10A	GMU 4/10A
FM01 1/2A	GMU 1/2A
FM01 6/10A	GMU 6/10A
FM01 3/4A	GMU 3/4A
FM01 1A	GMU 1A
FM01 11/2A	GMU 11/2A
FM01 2A	GMU 2A
FM01 3A	GMU 3A
FM01 4A	GMU 4A
FM01 5A	GMU 5A

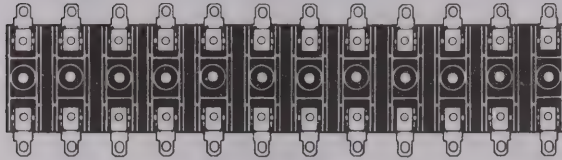
Part No.	BUSS Equivalent
M23419/1-005	GMU 1/16A
M23419/1-006	GMU 1/10A
M23419/1-007	GMU 1/8A
M23419/1-008	GMU 2/10A
M23419/1-009	GMU 1/4A
M23419/1-010	GMU 3/10A
M23419/1-011	GMU 4/10A
M23419/1-012	GMU 1/2A
M23419/1-013	GMU 6/10A
M23419/1-014	GMU 3/4A
M23419/1-015	GMU 1A
M23419/1-016	GMU 11/2A
M23419/1-017	GMU 2A
M23419/1-018	GMU 3A
M23419/1-019	GMU 4A
M23419/1-020	GMU 5A

BUSS FUSEHOLDERS LISTED UNDER MIL-F-19207B*

BUSS Military Type Designation	Electrical Rating
FHL10U	30A, 90-250V
FHL11U	30A, 90-250V
FHL12U	30A, 90-500V
FHL17G1	20A, 90-250V
FHL18G1-1	20A, 12-22V
FHL18G1-2	20A, 23-33V
FHL18G1-3	20A, 34-45V
FHL18G1-4	20A, 46-60V
FHL18G1-5	20A, 61-80V
FHL18G1-6	20A, 81-90V
FHL18G1-7	20A, 2.5-4V
FHL18G1-8	20A, 5-7V
FHL18G1-9	20A, 8-12V
FHN19G	15A, 250V
FHL22W	20A, 250V
FHN23W	30A, 250V
FHN26G1	30A, 250V
FHL29G-1	30A, 12-22V
FHL29G-2	30A, 23-33V
FHL29G-3	30A, 35-45V
FHL29G-4	30A, 46-60V
FHL29G-5	30A, 61-80V
FHL29G-6	30A, 81-90V
FHL30G-1	30A, 12-22V
FHL30G-2	30A, 23-33V

Pricing Available On Request

S-8000 1/4" x 1/4" FUSEBLOCKS

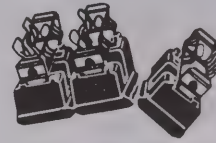


For tight cluster mounting of 1/4" x 1/4" fuses. Single-pole to 12 pole units. Break-away design permits fuseblock to be sub-divided by hand, 300 volt rating. UL recognized. CSA certified. Ctn. qty. 10.

Buss No.	Terminal Description		Rated Amps	Price Each Fuse Block
	Type	Angle		
S-8001-1	Solder	0°	25	\$ 1.37
S-8001-2	Solder	0°	25	2.52
S-8001-3	Solder	0°	25	3.76
S-8001-4	Solder	0°	25	5.01
S-8001-5	Solder	0°	25	6.34
S-8001-10	Solder	0°	25	12.81
S-8002-1	Solder	40°	25	1.37
S-8002-2	Solder	40°	25	2.52
S-8002-3	Solder	40°	25	3.76
S-8002-4	Solder	40°	25	5.01
S-8002-5	Solder	40°	25	6.34
S-8002-8	Solder	40°	25	10.29
S-8002-12	Solder	40°	25	15.36
S-8101-1	3/4" Quick Connect	0°	15	1.37
S-8101-2	3/4" Quick Connect	0°	15	2.52
S-8101-3	3/4" Quick Connect	0°	15	3.76
S-8101-4	3/4" Quick Connect	0°	15	5.01
S-8101-5	3/4" Quick Connect	0°	15	6.34
S-8101-10	3/4" Quick Connect	0°	15	12.81
S-8102-1	3/4" Quick Connect	40°	15	1.37
S-8102-2	3/4" Quick Connect	40°	15	2.52
S-8102-3	3/4" Quick Connect	40°	15	3.76
S-8102-4	3/4" Quick Connect	40°	15	5.01
S-8102-5	3/4" Quick Connect	40°	15	6.34
S-8102-10	3/4" Quick Connect	40°	15	12.81
S-8201-1	1/4" Quick Connect	0°	30	1.37
S-8201-2	1/4" Quick Connect	0°	30	2.52
S-8201-3	1/4" Quick Connect	0°	30	3.76
S-8201-4	1/4" Quick Connect	0°	30	5.01
S-8201-5	1/4" Quick Connect	0°	30	6.34
S-8201-10	1/4" Quick Connect	0°	30	12.81
S-8202-1	1/4" Quick Connect	40°	30	1.37
S-8202-2	1/4" Quick Connect	40°	30	2.52
S-8202-3	1/4" Quick Connect	40°	30	3.76
S-8202-4	1/4" Quick Connect	40°	30	5.01
S-8202-5	1/4" Quick Connect	40°	30	6.34
S-8202-10	1/4" Quick Connect	40°	30	12.81
S-8202-12	1/4" Quick Connect	40°	30	14.00
S-8203-1	1/4" Quick Connect	Side	30	1.91
S-8301-1	Screw	0°	30	2.41
S-8301-2	Screw	0°	30	4.79
S-8301-3	Screw	0°	30	8.10
S-8301-4	Screw	0°	30	10.53
S-8301-5	Screw	0°	30	13.75
S-8301-10	Screw	0°	30	27.87
S-8301-12	Screw	0°	30	25.10

Fuseholders

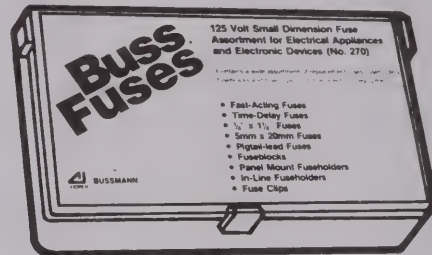
SERIES 2000 FUSEBLOCKS



For low cost, cluster mounting of 5 x 20mm fuses. Break-away design, combination quick-connect/solder terminals. Rated 15A, 250V. Ctn. qty. 10.

Buss No.	No. of Poles	Price Each Fuse Holder	Buss No.	No. of Poles	Price Each Fuse Holder
2000-1	1	\$ 2.19	2000-6	6	\$13.42
2000-2	2	4.46	2000-7	7	15.60
2000-3	3	6.65	2000-8	8	17.82
2000-4	4	8.95	2000-9	9	20.16
2000-5	5	11.17	2000-10	10	22.37

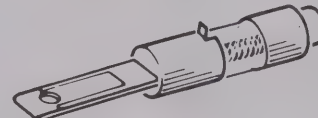
FOR REPAIR/MAINTENANCE OF ELECTRONIC AND ELECTRICAL DEVICES



The No. 270 kit is designed for plant, office or hospital maintenance departments that are frequently called upon to replace a fuse, yet never knowing which one they will need next. Application data in the No. 270 kit helps the user identify the correct fuse. Contains a complete assortment of 59 different products for quick service (270 fuses plus seven fuseholders and fuse clips). • Fast-acting fuses • 1/4" x 1/4" fuses • 5 x 20mm fuses • Pigtail lead fuses • Fuseholders • Panel mount fuseholders • In-line fuseholders • Fuseclips

Buss No.	Quantity Each
No. 270	\$266.12

POWER CORD FUSES



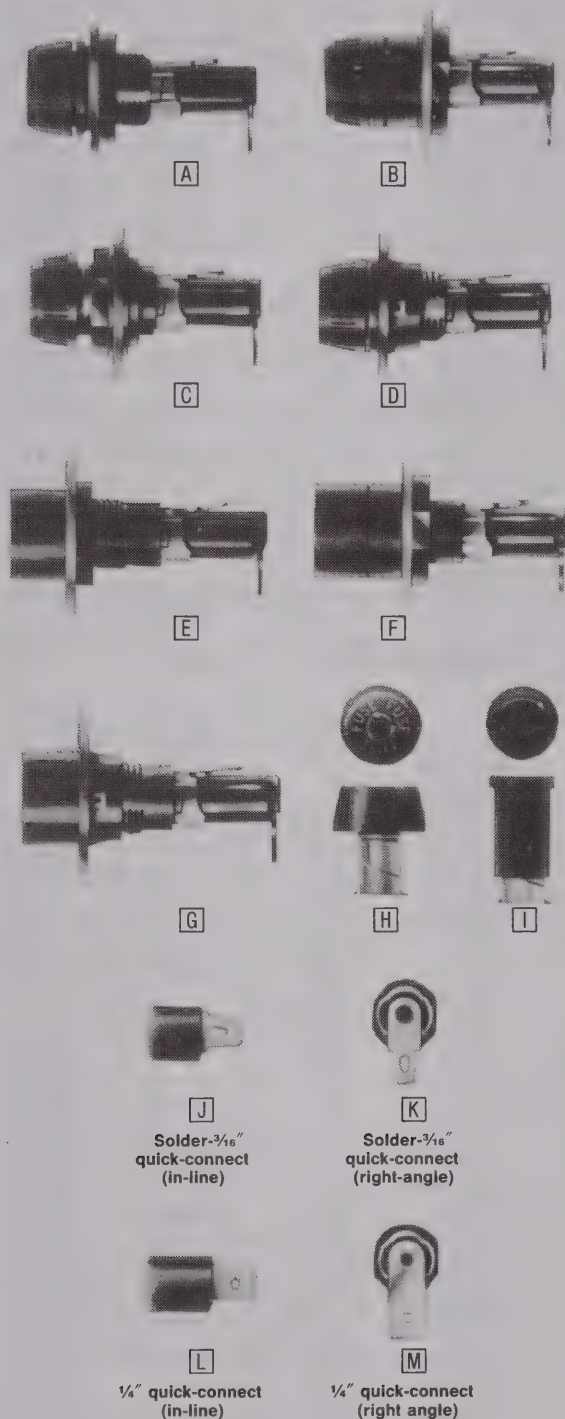
Replacement fuses for BELDEN fused line cord. The fused line cord protects the power cord and electrical device from damage, by allowing the overcurrent protection to be sized more closely to the needs of the application. Replacement fuses can be purchased in multiples of 5 or in the handy power cord fuse replacement kit. Fuse kit contains 10 of each amp size available (100 fuses) with reusable carrying case. Ctn. qty. 5.

Buss No.	Amps	Price Each Fuse	Buss No.	Amps	Price Each Fuse
ECF-1/2	1/2	\$1.91	ECF-3	3	\$1.91
ECF-3/4	3/4	1.91	ECF-4	4	1.91
ECF-1	1	1.91	ECF-5	5	1.91
ECF-1 1/2	1 1/2	1.91	ECF-6	6	1.91
ECF-2	2	1.91			

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.

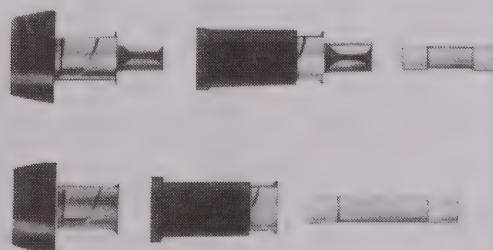
BUSS HTB UNIVERSAL FUSEHOLDERS

The 56 versions of the Buss HTB fuseholders offer complete design flexibility. Designed to UL, CSA, SEMKO and VDE standards. Both finger grip and screwdriver slotted fuse carriers are available. The HTB-40 and 50 series have a high mounting profile, while the HTB-20 and 30 series have a low mounting profile. The HTB-60 mounts through rear of panel permitting wire connections to be made to holder before mounting in panel. The HTB-80 and 90 series provide fast, easy and secure mounting without tools or hardware. Terminal options include in-line or right angle solder $\frac{3}{16}$ " quick-connects and in-line or right angle $\frac{1}{4}$ " quick-connects. The HTB will accept both $\frac{1}{4}$ " $\times$ $\frac{1}{4}$ " and 5mm $\times$ 20mm fuses simply by changing the carriers. 250 Volts.



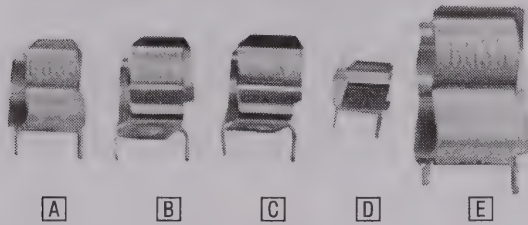
Buss Number	Mounting	Terminal	Price Each Fuse
FINGER GRIP KNOB HOLDERS (FIG. H)			
HTB-22I	A	J	\$3.34
HTB-22M	A	J	3.34
HTB-24I	A	K	3.34
HTB-24M	A	K	3.34
HTB-26I	A	L	3.70
HTB-26M	A	L	3.70
HTB-28I	A	M	3.70
HTB-28M	A	M	3.70
HTB-42I	B	J	3.34
HTB-42M	B	J	3.34
HTB-44I	B	K	3.34
HTB-44M	B	K	3.34
HTB-46I	B	L	3.70
HTB-46M	B	L	3.70
HTB-48I	B	M	3.70
HTB-48M	B	M	3.70
HTB-62I	C	J	3.34
HTB-62M	C	J	3.34
HTB-64I	C	K	3.34
HTB-64M	C	K	3.34
HTB-66I	C	L	3.70
HTB-66M	C	L	3.70
HTB-68I	C	M	3.70
HTB-68M	C	M	3.70
HTB-82I	D	J	3.34
HTB-82M	D	J	3.34
HTB-84I	D	K	3.34
HTB-84M	D	K	3.34
HTB-86I	D	L	3.70
HTB-86M	D	L	3.70
HTB-88I	D	M	3.70
HTB-88M	D	M	3.70
SCREW-DRIVER SLOTTED HOLDER (FIG. I)			
HTB-32I	E	J	\$3.34
HTB-32M	E	J	3.34
HTB-34I	E	K	3.34
HTB-34M	E	K	3.34
HTB-36I	E	L	3.70
HTB-36M	E	L	3.70
HTB-38I	E	M	3.70
HTB-38M	E	M	3.70
HTB-52I	F	J	3.34
HTB-52M	F	J	3.34
HTB-54I	F	K	3.34
HTB-54M	F	K	3.34
HTB-56I	F	L	3.70
HTB-56M	F	L	3.70
HTB-58I	F	M	3.70
HTB-58M	F	M	3.70
HTB-92I	G	J	3.34
HTB-92M	G	J	3.34
HTB-94I	G	K	3.34
HTB-94M	G	K	3.34
HTB-96I	G	L	3.70
HTB-96M	G	L	3.70
HTB-98I	G	M	3.70
HTB-98M	G	M	3.70

$\frac{1}{4}$ " $\times$ $\frac{1}{4}$ " and 5mm $\times$ 20mm Fuse Carriers



All holder bodies have the option of using either $\frac{1}{4}$ " $\times$ $\frac{1}{4}$ " or 5mm $\times$ 20mm carriers. This feature allows the OEM the flexibility of shipping equipment to international destinations simply by changing the fuse carriers.

FUSE CLIPS FOR PRINTED CIRCUIT BOARDS



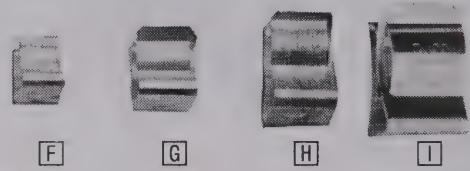
Spring bronze fuse clips provide high gripping strength and retain high spring pressure under adverse conditions. Also, spring bronze is the most economical base material available. However, the highest quality clip material is beryllium copper. It gives lasting spring pressure and high conductivity in high current applications or where frequent fuse replacement is anticipated. Bright tin plating complies with the solderability requirements of MIL STD 202 F Method 208. Contact the factory for information regarding the availability of other clip designs or plating finishes.

Buss No.	Fig.	Clip Material†	Finish	Price Each
For 1/4" Dia. Fuses (With End Stops)				
1A1907-03	A	BeCu*	Bright Tin	\$.76
1A1119-10	B	Spg. Br.	Bright Tin	.39
1A1119-05	B	BeCu*	Silver	.76
1A1119-04	B	BeCu*	Bright Tin	.67
For 1/4" Dia. Fuses (Without End Stops)				
1A1120-09	C	Spg Br	Bright Tin	.42
1A1120-05	C	BeCu*	Silver	.76
1A1120-06	C	BeCu*	Bright Tin	.67
For 5mm Dia. (With End Stops)				
1A3399-04	D	BeCu*	Bright Tin	.58
For 13/32" Dia. Fuses (20 Amps Max.)				
1A3400-09	E	Spg Br	Bright Tin	.69

*Beryllium copper recommended for currents higher than 15 amps (1/4" clips). 10 amps (5mm clips)

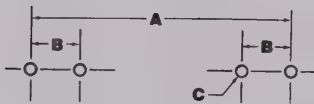
†Spg Br—Spring Bronze. BeCu—Beryllium Copper

TRON® FUSE CLIPS WITH MOUNTING HOLE



Buss No.	Fig.	End Stop	Clip Material†	Finish	Price Each
For 1/4" Dia. Fuses					
5682-44	F	Yes	Spg Br	Bright Tin	\$.24
5682-02	F	Yes	BeCu	Silver	.58
5682-41	F	Yes	Spg Br	Bright Tin	.24
5682-01	F	Yes	BeCu	Silver	.64
5681-15	F	Yes	Spg Br	Bright Tin	.39
For 3/32" Dia. Fuses					
5674-41	G	Yes	Spg Br	Bright Tin	.49
5674-01	G	Yes	BeCu	Silver	.97
5672-11	G	Yes	Spg Br	Bright Tin	.58
For 13/32" Dia. Fuses					
5960-63	H	Yes	Spg Br	Bright Tin	.64
5960-09	H	Yes	BeCu	Silver	1.47
5960-61	H	Yes	Spg Br	Bright Tin	.64
5960-07	H	Yes	BeCu	Silver	1.70
5956-16	H	Yes	Spg Br	Bright Tin	.39
For 1/2" Dia. Fuses					
5591-52	I	Yes	Spg Br	Bright Tin	.76
5592-33	I	Yes	Spg Br	Bright Dip	.82

†Spg Br—Spring Bronze; BeCu—Beryllium Copper



FOOTPRINT DIMENSIONS

Dim.	Fuse Size	1A1907-	1A1119-	1A1120-	1A3399-	1A3400-
A	7/8"	1.00"	1.00"	1.00"	.....	.....
	(22.2mm)	(25.40mm)	(25.40mm)	(25.40mm)		
A	1"	1.125"	1.125"	1.125"	.....	.....
	(25.4mm)	28.58mm	28.58mm	28.58mm		
A	1 1/4"	1.375"	1.375"	1.375"	.....	.....
	(31.8mm)	(34.920mm)	(34.920mm)	(34.920mm)		
A	1 3/8"	.....	.....	.....	.....	1.50"
	(34.93mm)					(38.10mm)
A	1 1/2"	.....	.....	.....	.....	1.625"
	(38.10mm)					(41.28mm)
A	20mm	.....	.....	.....	.875"	.....
					(22.23mm)	
B Tabs		.295"-.305"	.295"-.305"	.295"-.305"	.200"	.405"
		(7.49-7.75mm)	(7.49-7.75mm)	(7.49-7.75mm)	(5.08mm)	(10.29mm)
C (4 holes)		.067"-.070"	.093"±.002"	.093"±.002"	.067"-.070"	.091"-.095"
		(1.70-1.78mm)	(2.36±.05mm)	(2.36±.05mm)	(1.70-1.78mm)	(2.31-2.41mm)
Board Thickness		.093"	.062" to .125"	.062" to .125"	.093"	.125"
		(2.36mm)	(1.57 to 3.18mm)	(1.57 to 3.18mm)	(2.36mm)	(3.18mm)



SUBMINIATURE PICO® II FUSES (125 V OR LESS)

Only .28" long × .095" dia. with 1½" leads. For applications where space is at a premium. Encapsulated, epoxy-coated body. Replaces 275 and 276 Series PicoFuses. **Blow Time:** 100%, 4 hrs. min.; 200%, 1 sec. max. (¼-10 amps), 3 sec. max. (12-15 amps). **UL Recognized. CSA Certified.** Order 251 Series for axial leads; 252 Series for radial leads.

251 SERIES

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
251.062	1/16	5	\$1.24
251.125	1/8	5	1.11
251.250	1/4	5	1.11
251.375	3/8	5	1.11
251.500	1/2	5	1.11
251.750	3/4	5	0.87
251001	1	5	0.87
25101.5	1½	5	0.87
251002	2	5	0.87
25102.5	2½	5	0.71
251003	3	5	0.87
25103.5	3½	5	0.87
251004	4	5	0.87
251005	5	5	0.87
251007	7	5	0.87
251010	10	5	0.87
251012	12	5	1.36
251015	15	5	1.36

256 & 255 SERIES

For Pico® II fuses with color-coded bodies, order 256(000) series (radial leads) or 255(000) series (axial leads).

MICRO™ FUSE SUBMINIATURE FUSES

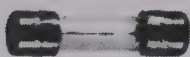
(125V)



For PC and other min. space uses. Plug-in types use holder; pigtail types for soldering. Short circuit interrupting capacity 125 V, 10,000 amps AC. **Blow Specs:** 100%, 4-hour min.; 200%, 5-sec. max. **Size:** ¼" dia. × 1½" (fuse body). Plug-in, transparent cap type listed. Use prefix 272 for plug-in, metal cap; prefix 279 for pigtail, transparent cap; prefix 278 for pigtail, metal cap. **UL Recognized. CSA Certified.**

Mfr. No.	Amp. Rating	Pkg. Qty.	Price Each
273.002	1/500	5	\$5.69
273.005	1/200	5	5.69
273.010	1/100	5	5.69
273.015	1/64	5	5.69
273.031	1/32	5	5.69
273.050	1/20	5	2.34
273.062	1/16	5	2.34
273.100	1/10	5	2.34
273.125	1/8	5	2.34
273.200	3/10	5	2.34
273.250	1/4	5	2.34
273.300	3/10	5	2.34
273.400	1/2	5	2.34
273.500	3/4	5	2.34
273.600	1	5	2.34
273.700	1½	5	2.34
273.750	2	5	2.34
273.800	3	5	2.34
273001	4	5	2.34
27301.5	5	5	2.34
273002	7	5	2.34
273003	10	5	2.34
273004	12	5	2.34
273005	15	5	2.34

5 × 20 MM SUBMINIATURE FUSES



A must for servicing European electronic equipment. **Size:** 5 mm × 20 mm (.2" × .8").

FAST-ACTING (250 V) HIGH INTERRUPTING CAPACITY TYPE F

Blow Time: .050-3.15 amperes-150%, 60 minutes min.; 210%, 30 minutes max.; 275% .01-2 sec.; 400%, 0.003-0.3 sec.; 1000% 0.02 sec. max. 4-10 amperes-150%, 60 minutes min.; 210%, 30 minutes max.; 275%, 0.01-3 sec.; 400%, 0.003-0.3 sec.; 1000%, 0.02 sec. max. **SEMKO approved through 6.3 amperes.**

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
216.050	1/20	5	\$1.49
216.062	1/16	5	1.49
216.080	5/64	5	1.49
216.100	1/10	5	1.19
216.125	1/8	5	1.19
216.160	5/32	5	1.19
216.200	3/10	5	1.19
216.250	1/4	5	1.19
216.315	5/16	5	1.19
216.400	3/10	5	1.19
216.500	1/2	5	1.19
216.630	5/8	5	1.19
216.800	1	5	1.19
216001	1	5	1.19
2161.25	1½	5	1.19
21601.6	1¾	5	1.19
216002	2	5	1.19
21602.5	2½	5	1.19
2163.15	3½	5	1.19
216004	4	5	1.19
216005	5	5	1.19
21606.3	6¾	5	1.19
216008	8	5	1.27
216010	10	5	1.27

FAST ACTING (250 V) TYPE F

Blow Time: .032-100 amperes-150%, 60 minutes min.; 210%, 30 minutes max.; 275%, 0.01-0.5 sec.; 400%, 0.003-0.1 sec.; 1000%, 0.02 sec. max., 125-10 amperes-150%, 60 minutes min.; 210% 30 minutes max.; 275%, 0.05-2 sec.; 400% 0.01-0.3 sec.; 1000%, 0.02 sec. max. **SEMKO approved thru 6.3 amperes. VDE approved and BEAB approved from .050 to 6.3 amperes.**

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
217.032	1/32	5	\$1.39
217.040	1/25	5	1.39
217.050	1/20	5	1.39
217.062	1/16	5	1.39
217.080	5/64	5	1.39
217.100	1/10	5	1.39
217.125	1/8	5	1.39
217.160	5/32	5	0.86
217.200	3/10	5	0.86
217.250	1/4	5	0.86
217.315	5/16	5	0.87
217.400	1/2	5	0.86
217.500	3/4	5	0.25
217.630	5/8	5	0.25
217.800	1	5	0.25
217001	1	5	0.25
2171.25	1½	5	0.25
21701.6	1¾	5	0.25
217002	2	5	0.25
21702.5	2½	5	0.25
2173.15	3½	5	0.25
217004	4	5	0.25
217005	5	5	0.25
21706.3	6¾	5	0.25
217008	8	5	1.01
217010	10	5	1.01

SLO-BLO® FUSES (250 V) TYPE T

Blow Time: .032-100 amperes-150%, 60 minutes min.; 210%, 2 minutes max.; 275%, 0.2-10 sec.; 400%, 0.04-3 sec.; 1000%, 0.01-0.3 sec., 125-10 amperes-150%, 60 minutes min.; 210%, 2 minutes max.; 275%, 0.6-10 sec.; 400%, 0.15-3 sec.; 1000%, 0.02-0.3 sec. **SEMKO, VDE and BEAB approved through 6.3 amperes.**

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
218.032	1/32	5	\$1.79
218.040	1/25	5	1.79
218.050	1/20	5	1.79
218.062	1/16	5	1.79
218.080	5/64	5	1.79
218.100	1/10	5	1.09
218.125	1/8	5	1.09
218.160	5/32	5	1.09
218.200	3/10	5	1.09
218.250	1/4	5	1.09
218.315	5/16	5	1.09
218.400	1/2	5	1.09
218.500	3/4	5	0.78
218.630	5/8	5	0.78
218.800	1	5	0.78
218001	1	5	0.78
2181.25	1½	5	0.78
21801.6	1¾	5	0.78
218002	2	5	0.78
21802.5	2½	5	0.78
2183.15	3½	5	0.78
218004	4	5	0.78
218005	5	5	0.78
21806.3	6¾	5	0.78
218008	8	5	1.01
218010	10	5	1.01

3AG SLO-BLO® PIGTAIL FUSES

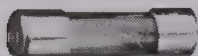
(250V)
¼" × 1½"



Same as 313 Series above, but with pigtail leads. To order change series number to 315. **Fuse Diameter:** .275". **Fuse Length:** 1.275". **Pigtail Diameter:** .032" (1 100-15A); .040" (20-30A). **Pigtail Length:** 1.50". **Pigtail Material:** Tinned copper wire. **UL Listed and CSA Certified thru 8 amps. UL Recognized 8 thru 30 amps.**

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
315.010	1/100	5	\$2.60
315.031	1/32	5	2.60
315.040	1/25	5	2.60
315.062	1/16	5	2.21
315.100	1/10	5	2.21
315.125	1/8	5	2.21
315.150	5/100	5	2.21
315.175	175ma	5	2.21
315.187	3/16	5	2.21
315.200	1/4	5	2.21
315.250	3/8	5	1.29
315.300	1/2	5	1.29
315.375	5/8	5	1.29
315.400	1	5	1.29
315.500	1½	5	1.01
315.600	2	5	1.01
315.700	2½	5	1.01
315.750	3	5	1.01
315.800	3½	5	1.01
315001	4	5	1.01
31501.05	5	5	1.01
3151.25	6	5	1.01
31501.5	7	5	1.01
31501.6	8	5	1.01
31501.8	9	5	1.01
315002	10	5	1.01
3152.25	11	5	1.01
31502.5	12	5	1.01
31502.8	13	5	1.01
315003	14	5	1.01
31503.2	15	5	0.99
315004	16	5	0.99
315005	17	5	0.99
3156.25	18	5	0.99
315007	19	5	0.99
315008	20	5	0.99
315010	21	5	1.19
315012	22	5	1.19
315015	23	5	1.19
315020	24	5	1.19
315025	25	5	1.19
315030	30	5	1.19

8AG INSTRUMENT FUSES (250V OR LESS) 1/4" x 1"



Blow Time: 100%, 4-hour min.; 200%, 5-sec. max.

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
361.002	1/500	5	\$7.71
361.005	1/200	5	4.78
361.010	1/100	5	4.41
361.015	1/64	5	4.07
361.031	1/32	5	4.07
361.062	1/16	5	1.44
361.100	1/10	5	0.97
361.125	1/8	5	0.97
361.187	3/16	5	0.97
361.200	2/10	5	0.97
361.250	1/4	5	0.60
361.375	3/8	5	0.60
361.400	1/2	5	0.60
361.500	3/4	5	0.60
361.750	1	5	0.35
361001	1 1/2	5	0.35
36101.5	2	5	0.35
361002	3	5	0.36
361003*	4	5	0.36
361004*	5	5	0.36
361005*			

*125 volt

8AG NORMAL BLO FUSES 1/4" x 1"

Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 10 sec. max. UL Listed thru 6 amps. CSA Certified 1/4 thru 5 amps.

362.125**	1/8	5	\$0.97
362.250**	1/4	5	0.60
362.375**	3/8	5	0.60
362.500**	1/2	5	0.60
362.750**	3/4	5	0.60
362001**	1	5	0.35
36201.5*	1 1/2	5	0.35
362002*	2	5	0.35
36202.5*	2 1/2	5	0.35
362003*	3	5	0.25
362004*	4	5	0.25
362005*	5	5	0.25
362006*	6	5	0.25
362008†	8	5	0.25
362010†	10	5	0.25
362012†	12	5	0.25
362015†	15	5	0.25
362020†	20	5	0.25
362025†	25	5	0.25
362030†	30	5	0.25

**250 volt *125 volt †32 volt

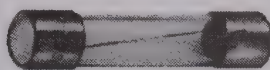
3AB CERAMIC BODY RECTIFIER FUSES (250 V OR LESS) 1/4" x 1/4"

For protection of silicon controlled rectifiers and similar solid state devices. Extremely fast acting. UL Recognized.

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
322001	1	5	\$3.74
3221.25	1 1/4	5	3.74
322002	2	5	3.74
322003	3	5	3.74
322004	4	5	3.74
322005	5	5	3.74
322006	6	5	3.74
322007	7	5	3.74
322008	8	5	3.74
322009	9	5	3.74
322010	10	5	3.74
322012*	12	5	3.74
322015*	15	5	3.74
322020*	20	5	3.74
322025*	25	5	3.74
322030*	30	5	3.74

*65 volt

3AG NORMAL BLO FUSES (250V)—1/4" x 1/4"



Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 5 sec. max. UL Listed and CSA Certified.

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
312.010	1/100	5	\$4.25
312.031	1/32	5	4.25
312.062	1/16	5	1.07
312.100	1/10	5	1.07
312.125	1/8	5	1.07
312.150	15/100	5	1.07
312.175	175ma	5	1.07
312.187	3/16	5	1.07
312.200	2/10	5	1.07
312.250	1/4	5	0.66
312.300	3/10	5	0.66
312.375	3/8	5	0.66
312.500	1/2	5	0.45
312.600	5/10	5	0.45
312.750	3/4	5	0.45
312001	1	5	0.29
3121.25	1 1/4	5	0.29
31201.5	1 1/2	5	0.29
31201.6	1 1/10	5	0.29
3121.75	1 3/4	5	0.29
312002	2	5	0.29
3122.25	2 1/4	5	0.29
31202.5	2 1/2	5	0.29
312003	3	5	0.29
312004	4	5	0.45
312005	5	5	0.45
312006	6	5	0.45
312007	7	5	0.45
312008	8	5	0.61
312010	10	5	0.61

3AB CERAMIC BODY FUSES (250V OR LESS)—1/4" x 1/4"



Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 15-sec. max.; (18-12 A); 60 sec. max. (15-30 A). UL Listed and CSA Certified thru 15 A; UL Recognized. 20-30 A

314.125	1/8	5	\$1.07
314.250	1/4	5	0.81
314.375	3/8	5	0.81
314.500	1/2	5	0.81
314.750	3/4	5	0.81
314001	1	5	0.76
314002	2	5	0.76
314003	3	5	0.76
314004	4	5	0.76
314005	5	5	0.72
314006	6	5	0.72
314007	7	5	0.72
314008	8	5	0.72
314010	10	5	0.72
314012	12	5	0.72
314015	15	5	0.72
314020	20	5	1.08
314025*	25	5	1.08
314030*	30	5	1.08

*125 volt.

3AG NORMAL BLO PIGTAIL FUSES (250V)—1/4" x 1/4"

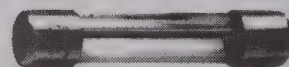
Same as 312 Series above, but with pigtail leads. To order change series number to 318. Fuse Diameter: .275". Fuse Length: 1.275". Pigtail Diameter: .032". Pigtail Length: 1.50". Pigtail Material: Tinned copper wire. UL Listed and CSA Certified.

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
318.010	1/100	5	\$4.04
318.031	1/32	5	4.04

3AG NORMAL BLO PIGTAIL FUSES CONT'D

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
318.062	1/16	5	\$1.47
318.100	1/10	5	1.47
318.125	1/8	5	1.47
318.150	15/100	5	1.47
318.175	175ma	5	1.47
318.187	3/16	5	1.47
318.200	2/10	5	1.47
318.250	1/4	5	0.90
318.300	3/10	5	0.90
318.375	3/8	5	0.90
318.500	1/2	5	0.90
318.600	5/10	5	0.90
318.750	3/4	5	0.90
318001	1	5	0.65
3181.25	1 1/4	5	0.65
31801.5	1 1/2	5	0.65
31801.6	1 1/10	5	0.65
318002	2	5	0.65
3182.25	2 1/4	5	0.65
31802.5	2 1/2	5	0.65
318003	3	5	0.65
318004	4	5	0.69
318005	5	5	0.69
318006	6	5	0.69
318007	7	5	0.69
318008	8	5	0.69
318010	10	5	0.69

3AG SLO-BLO® FUSES (250V OR LESS) 1/4" x 1/4"



Blow Time: 110%, 4-hour min.; 135%, 1 hour max.; 200%, 5-sec. min. Length 1 1/4", 1 1/2". UL Listed and CSA Certified thru 8 amps. UL Recognized 10 thru 30 amps.

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
313.010	1/100	5	\$2.14
313.031	1/32	5	2.14
313.040	1/25	5	2.14
313.062	1/16	5	1.70
313.100	1/10	5	1.70
313.125	1/8	5	1.70
313.150	15/100	5	1.70
313.175	175ma	5	1.70
313.187	3/16	5	1.70
313.200	2/10	5	1.70
313.250	1/4	5	1.03
313.300	3/10	5	1.03
313.375	3/8	5	1.03
313.400	1/2	5	0.98
313.500	5/10	5	0.98
313.600	3/4	5	0.98
313.700	1	5	0.98
313.750	3/4	5	0.98
313.800	5/10	5	0.98
313001	1	5	0.98
31301.5	1 1/2	5	0.74
3131.25	1 1/4	5	0.74
31301.6	1 1/10	5	0.74
31301.8	1 1/8	5	0.74
313002	2	5	0.74
3132.25	2 1/4	5	0.74
31302.5	2 1/2	5	0.74
31302.8	2 3/10	5	0.74
313003	3	5	0.74
31303.2	3 1/10	5	0.74
313004	4	5	0.74
313005	5	5	0.74
3136.25	6 1/4	5	0.74
313007	7	5	0.74
313008	8	5	0.74
313010*	10*	5	1.00
313012*	12*	5	1.00
313015*	15*	5	1.00
313020*	20*	5	1.00
313025*	25*	5	1.00
313030*	30*	5	1.00

*32 volt.

BE SURE TO WATCH FOR OUR "POWER SOURCE" BROCHURES.

3AB CERAMIC SLO-BLO® FUSES (250 V OR LESS) 1/4" x 1 1/4"



Blow Time: 110%, 4-hr. min.; 135%, 1 hr. max.; 200%, 5-sec. min. 1/4 thru 10 amps UL Listed. 15 thru 30 amps UL Recognized and CSA Certified.

SERIES 326

Ampere Rating	Pkg. Qty.	Price Each
1/100	5	\$2.48
1/32, 1/16	5	1.86
1/10, 1/8, 15/100	5	1.68
.175, 3/16, 2/10	5	2.23
1/4, 3/10, 3/8, 4/10, 1/2	5	1.67
5/10, 7/10, 3/4, 4/10, 1	5	1.67
1 1/4, 1 1/2, 1 3/4, 2	5	1.67
2 1/2, 2 3/4, 3, 3 3/4	5	1.16
4, 5, 6 1/4, 7, 8, 10	5	1.16
12, 15, 20, 25*, 30*	5	1.16

PIGTAIL SERIES 325

Ampere Rating	Pkg. Qty.	Price Each
1/100	5	\$3.00
1/32, 1/16	5	2.32
1/10, 1/8, 15/100	5	2.14
.175, 3/16, 2/10	5	2.70
1/4, 3/10, 3/8, 4/10, 1/2	5	2.09
5/10, 7/10, 3/4, 4/10, 1	5	2.09
1 1/4, 1 1/2, 1 3/4, 2	5	2.09
2 1/2, 2 3/4, 3, 3 3/4, 4	5	1.57
5, 6 1/4, 7, 8, 10, 12	5	1.57
15, 20, 25*, 30*	5	1.57

*125 Volt

FLQ MIDGET FUSES (500 V-UL; CSA) 1 3/32" x 1 1/2"



Slo-Blo®, time delay fuses. **Blow Time:** 110%, 4 hrs. min.; 135%, 1 hr. max.; 200%, 12 sec. min. **Short Circuit Rating:** 10,000 A. **UL Listed and CSA Certified.** To order, use Series Prefix **FLQ**, followed by ampere rating. **Ampere Ratings:** 1/10, 1/8, 15/100, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, 1/2, 5/10, 7/10, 3/4, 4/10, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 3/4, 3, 3 3/4, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6, 6 1/4, 7, 8, 9, 10, 12, 14, 15, 20, 25, 30 amps.

Ampere Ratings	Pkg. Qty.	Price Each
1/10, 1/8, 3/10, 4/10, 1 1/4	5	\$ 9.99
2 1/4, 4 1/2, 5 1/2, 6 1/4, 9	5	9.99
1/2, 1, 1 1/2, 1 3/4, 2, 4	5	7.52
5, 6, 7, 8, 10, 12	5	7.52
15, 20, 25, 30	5	7.52
15/100, 3/16, 1 1/8, 14	5	11.51
1/4, 4/10, 3/8, 3 1/2	5	8.63

MIL. SPEC. FUSES AND FUSEHOLDERS ARE ALSO AVAILABLE FROM LITTELFUSE. CONTACT DISTRIBUTOR FOR SPECIFICS.

BLF MIDGET FUSES 250 V(1/2-15A) 125 V(20-30A) 1 3/32" x 1 1/2"



Laminated tube construction. **Blow Time:** 110%, 4 hrs. min.; 135%, 1 hr. max.; 200% 15 sec. max. **Short Circuit Rating:** 10,000 A. **UL Listed; CSA Certified.** To order, use Series Prefix **BLF**, followed by ampere rating. **Ampere Ratings:** 1/2, 1, 1 1/2, 2, 2 1/2, 3, 4, 5, 6, 6 1/4, 7, 8, 9, 10, 12, 15, 20, 25, 30 amps.

Ampere Rating	Pkg. Qty.	Price Each
1/2, 1 1/2, 2 1/2, 4	10	\$1.98
1, 2, 3, 5, 6	10	1.53
7, 8, 9, 12, 25	10	1.58
10, 15, 20, 30	10	1.20

BLN MIDGET FUSES (250 V) 1 3/32" x 1 1/2"



Fibre tube construction. **Blow Time:** 110%, 4 hrs. min.; 135%, 1 hr. max.; 200%, 15 sec. max. **Short Circuit Rating:** 10,000 A. **UL Listed; CSA Certified.** To order, use Series Prefix **BLN**, followed by ampere rating. **Ampere Ratings:** 1, 2, 3, 4, 5, 6, 8, 10, 12, 15, 20, 25, 30 amps.

Ampere Rating	Pkg. Qty.	Price Each
1, 2, 3, 4, 5, 6	10	\$2.09
8, 12, 25	10	2.09
10, 15, 20, 30	10	1.80

BLS MIDGET FUSES (600 V) 1 3/32" x 1 3/8"

Fast acting fuses. **Blow Time:** 110%, 4 hrs. min.; 135%, 1 hr. max. 200%. 1/10-5 1/2 secs. max. 6-10 secs. max. **Short Circuit Rating:** 10,000 A. **UL Listed and CSA Certified** 12-5 amperes. To order, use Series Prefix **BLS**, followed by ampere rating. **Ampere Ratings:** 1/10, 1/8, 15/100, 3/16, 2/10, 1/4, 3/10, 3/8, 4/10, 1/2, 5/10, 7/10, 3/4, 4/10, 1, 1 1/4, 1 1/2, 1 3/4, 2, 2 1/4, 2 3/4, 3, 3 1/4, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6, 6 1/4, 7, 8, 9, 10, 12, 15, 20, 25, 30 amps.

Ampere Rating	Pkg. Qty.	Price Each
1 1/2, 1 3/4, 1 5/8, 6	10	\$3.81
7, 8	10	3.81
1	10	2.55
2, 3, 4, 5	10	2.94
6, 7, 8	10	3.81
10	10	3.32

KLK MIDGET FUSES (600 V) 1 3/32" x 1 1/2"



Fast acting fuses for use in circuits with high fault current capacity. **Blow Time:** 110%, 4 hrs. min.; 135% 1 hr. max. **Short Circuit Rating:** 600 VAC; 100,000 A. 500 VDC; 150,000 A. **UL Listed. CSA Certified** 1/10-30 A. To order, use Series Prefix **KLK**, followed by ampere rating. **Ampere Ratings:** 1/10, 1/8, 3/10, 4/10, 1/4, 3/8, 1/2, 5/8, 3/4, 1, 1 1/4, 2, 2 1/4, 3, 3 1/4, 4, 5, 6, 7, 8, 9, 10, 12, 15, 20, 25, 30 amps.

Ampere Rating	Pkg. Qty.	Price Each
1/10, 3/4, 2 1/2, 7, 12	10	\$8.09
1/8, 3/10, 3/8, 3 1/2, 9	10	9.29
1/4, 1 1/2	10	6.82
1/2, 1, 2, 3, 4, 5, 6	10	6.06
8, 10, 15	10	6.06
20, 25, 30	10	6.25

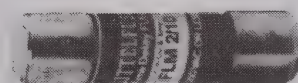
FLA INDICATING FUSES 250 V (1/10-8/10 A) 125 V(1-30A) 1 3/32" x 1 1/2"



Time delay fuses. Indicating pin protrudes when fuse is blown. Fuses above 10 amperes have dual tube construction. **Blow Time:** 110%, 4 hrs. min.; 135%, 1 hr. max. **Short Circuit Rating:** 10,000 A. **UL Listed 1/10-30 A.** To order, use Series Prefix **FLA**, followed by ampere rating. **Ampere Ratings:** 1/10, 15/100, 3/10, 1/4, 3/8, 4/10, 1/2, 5/10, 7/10, 1, 1 1/4, 1 1/2, 1 3/4, 1 5/8, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6, 6 1/4, 7, 8, 10, 12, 15, 20, 25, 30 amps.

Ampere Rating	Pkg. Qty.	Price Each
1/10, 15/100, 1/4, 3/10	10	\$7.34
3/8, 1 1/4	10	7.34
3/10	10	6.42
1/2, 5/10, 1 1/8, 1 1/4	10	5.45
3/4, 1 1/4, 1 1/2, 1 3/4	10	6.31
2, 3, 5, 10	10	5.39
2 1/4, 2 3/4, 3 1/4, 3 1/2	10	8.12
4 1/2, 5 1/4, 6 1/4, 12	10	8.12
20, 25, 30	10	8.12
6, 7, 8, 15	10	7.14

FLM MIDGET FUSES (250 V) 1 3/32" x 1 1/2"



Slo-Blo®, time delay fuses. **Blow Time:** 110%, 4 hrs. min.; 135%, 1 hr. max.; 200%, 12 sec. min. **Short Circuit Rating:** 10,000 A. **UL Listed. CSA Certified.** To order, use Series Prefix **FLM**, followed by ampere rating. **Ampere Ratings:** 1/10, 15/100, 3/10, 1/4, 3/8, 4/10, 1/2, 5/10, 7/10, 1, 1 1/4, 1 1/2, 1 3/4, 1 5/8, 2, 2 1/4, 2 1/2, 2 3/4, 3, 3 1/4, 3 1/2, 4, 4 1/2, 5, 5 1/2, 6, 6 1/4, 7, 8, 9, 10, 12, 15, 20, 25, 30 amps.

Ampere Ratings	Pkg. Qty.	Price Each
1/10, 15/100, 3/10, 1/4, 3/10	10	\$4.33
3/8, 1 1/4	10	4.33
1/2, 5/10, 7/10, 1 1/4	10	3.27
1 1/2, 1 3/4, 2 1/4, 2 1/2	10	3.27
1	10	2.84
1 1/4	10	3.83
1 3/4, 2 1/4, 4 1/2	10	4.05
5 1/4, 9	10	4.05
3, 4, 5, 10	10	2.63
15, 20, 30	10	2.63
6, 6 1/4, 7, 8	10	3.04
12, 25	10	3.04

KLKR MIDGET FUSES (600 V)

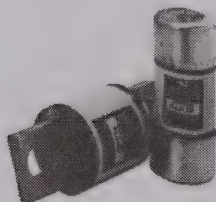
Similar to KLK Series but has higher short circuit rating, reject feature for added protection, and may be used in branch circuit protection. **Short Circuit Rating:** 200,000 A. **UL Listed as Class CC Branch Circuit Protection. CSA Certified** 1/10-30A. **Ampere Ratings:** 1/10, 1/8, 3/10, 1/4, 3/8, 1/2, 5/8, 3/4, 1, 1 1/4, 2, 2 1/4, 3, 3 1/4, 4, 5, 6, 7, 8, 9, 10, 12, 15, 20, 25, 30A.

Ampere Rating	Pkg. Qty.	Price Each
1/10, 3/4, 2 1/2, 7	10	\$ 8.94
1/8, 3/10, 1/4, 3/8	10	10.35
3 1/2, 9	10	10.35
1/2, 1, 1 1/2, 2, 3	10	6.74
5, 6, 10, 15, 20, 30	10	6.74
8, 12, 25	10	7.65

SEMICONDUCTOR RECTIFIER FUSES

Designed for high degree of current limitation and fast acting protection. Low peak let-thru current capability. For protection of solid state devices and isolation of faulted devices to prevent further equipment damage.

L15S



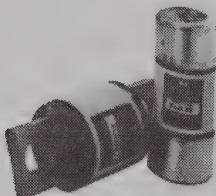
Replaces KLA, KLW, KAA, KAH, KAW and L13S. Applications include rectifiers, SCR drives, motor controls, battery chargers, thyristors and diodes, variable speed drives, inverters and solid state equipment.

Voltage: 150 VAC or less. **Interrupting Rating:** 200,000 amperes AC. **Test Specifications:** 100% 4 hrs. min. UL recognized.

To order, use Series Prefix **L15S** followed by desired ampere rating.

Ampere Rating	Pkg. Qty.	Price Each
1,2,3,5	10	\$ 7.38
4,6,7,8,9,12,25	10	8.26
10,15,20	10	6.12
30	10	6.76
35,40,45,50,60	10	17.93
70,100,125,250,300	10	28.81
80,90	10	33.25
150,200,400	10	25.10
350	10	33.13
450,500,600,800,1000	5	64.68

L25S



Replaces KAX, KLB and KAB. Applications include rectifiers, SCR drives, motor controls, battery chargers, thyristors and diodes, inverters and solid state equipment. **Voltage:** 250 VAC or less. **Interrupting Rating:** 200,000 amperes AC. **Test Specifications:** 100% 4 hrs. min. UL recognized.

To order, use Series Prefix **L25S** followed by desired ampere rating.

Ampere Rating	Pkg. Qty.	Price Each
1,2,3,4,12	10	\$ 9.44
5,8,25	10	8.09
6,15,20,30	10	8.38
10	10	6.98
15	10	7.61
35	10	28.21
40,50,60	10	24.00
45	10	24.00
70,80,100,150,200	5	32.33
90,125,175	5	34.59
225,450,500,700,800	5	30.78
250,275,300,350,400	5	42.02

KLC SERIES



Replaces KAC. Applications include rectifiers, SCR drives, motor controls, battery chargers, inverters and solid state equipment. **UL Recognized:** Guide JFHR2 (Component Special Purpose Fuses): 35-800 amperes. **Voltage:** 600 VAC or less. **Interrupting Rating:** 200,000 amperes AC. **Test Specifications:** 100% 4 hrs. min.

To order, use Series Prefix **KLC** followed by desired ampere rating.

Ampere Rating	Pkg. Qty.	Price Each
1,2,3,4,6,7,10	10	\$13.62
12,17½	10	13.62
5,8,15,20,25,30	10	13.11
35,40,50	10	29.60
45	10	30.92
60	10	22.92
70,100	5	30.02
80	1	38.89
90	1	40.59
110	1	50.61
125,150,200	1	43.98
175	1	51.55
225,300,350	1	72.02
250,400	1	61.33
450,700	1	—
500,600,800,1000	1	—

L50S SERIES



Replaces KLH, KBH. Applications include solid state equipment inverters, thyristors and diodes, motor controls, rectifiers and battery chargers. **Voltage:** 500 VAC or less. **Interrupting Rating:** 200,000 amperes AC. **Test Specifications:** 100% 4 hrs. min. UL recognized.

To order, use Series Prefix **L50S** followed by desired ampere rating.

Ampere Rating	Pkg. Qty.	Price Each
10,20,25,30	10	\$14.52
12	10	15.98
15	10	11.92
35,40,50,60	10	22.03
70,80	5	27.02
90	5	30.92
100	5	23.02
125,175,200	1	41.20
150	1	35.14
225	1	64.16
250,275,350,400	1	55.96
300	1	47.69
450,550	1	89.04
500,600	1	77.50
700	1	—
800	1	—

HI-INTERRUPTING FUSES

Non-interchangeable, current limiting fuses. Commonly known as "bolt-on" fuses, they are bolted to bus bars and used for protection against high-energy faults and other abnormal surges in distribution systems.

KLP-C SERIES CLASS L FUSES



Replaces KRP-C. Applications include service entrance equipment, air interrupter switches, bolted pressure switches, circuit breakers, safety switches and main feeder and branch circuits. **UL Listed per 198C.**

Class L Certified By CSA. Voltage: 600 VAC or less. **Interrupting Rating:** 200,000 amperes AC. **Test Specifications:** 110% 4 hrs. min; 150% 4 hrs. max.

To order, use Series Prefix **KLP-C** followed by desired ampere rating.

Mfr. No.	Pkg. Qty.	Price Each
KLPC601	1	\$ 287.53
KLPC650	1	335.93
KLPC700	1	287.53
KLPC750	1	335.93
KLPC800	1	250.84
KLPC900	1	336.24
KLPC1000	1	251.93
KLPC1100	1	389.56
KLPC1200	1	251.93
KLPC1300	1	389.56
KLPC1350	1	438.22
KLPC1400	1	438.22
KLPC1500	1	438.22
KLPC1600	1	328.51
KLPC1800	1	578.27
KLPC1900	1	656.68
KLPC2000	1	492.98
KLPC2100	1	656.68
KLPC2200	1	656.68
KLPC2300	1	656.68
KLPC2500	1	652.97
KLPC3000	1	753.00
KLPC3500	1	1190.29
KLPC4000	1	1014.68
KLPC4500	1	1671.40
KLPC5000	1	1457.02
KLPC6000	1	1801.04

KLLU SERIES



Economical version of KLP-C Series, for use in less critical applications. Contact factory for Time Current Curve. **UL Listed per 198C, Class L. Certified by CSA. Voltage:** 600 VAC or less. **Interrupting Rating:** 200,000 amperes AC. **Test Specifications:** 110% 4 hrs. min; 150% 4 hrs. max.

To order, use Series Prefix **KLLU** followed by desired ampere rating.

Mfr. No.	Pkg. Qty.	Price Each
KLLU601	1	\$296.16
KLLU650	1	339.80
KLLU700	1	297.47
KLLU750	1	297.47
KLLU800	1	252.28
KLLU900	1	297.47
KLLU1000	1	252.28
KLLU1200	1	252.28
KLLU1400	1	297.47
KLLU1500	1	389.56
KLLU1600	1	287.53
KLLU1800	1	388.55
KLLU2000	1	374.72

**NEED VALUE-ADDED SERVICES?
CALL US FOR INFORMATION.**



FLNR (250 V AND FLSR (600 V) SERIES GENERAL PURPOSE FUSES



Replaces FRNR (250V) and FRSR (600V) fuses. Slo-Blo® time delay. Current limiting fuses provide protection against fault currents up to 200,000 amperes. This type of fuse with its Class R reject feature (for added protection), replaces older type Class H one-time and renewable fuses in service entrance equipment, motor circuits, transformers, and all general purpose applications. Applications include fuse coordinated systems, single and 3-phase motor overload protection, circuit breaker-coordinated systems, fault currents up to 200,000 amperes, thermal sensitivity circuits, utilities and all purpose industrial applications. **UL Listed per 198.E Class RK5. Voltage:** FLNR, 250 VAC or less; FSLR 600VAC or less 200,000 amperes AC. **Interrupting Rating:** Opening times 4 hrs., (min.), 135%: 1 hr. (0-60 A), 2 hr., (70-600A), 200%; 2 min., (0-30A), 4 min., (31-60A) 6 min. (61-100 A), 8 min., (101-200 A), 10 min., (201-400 A), 12 min., (401-600A), 500%; 10 sec., min. To order, use Series Prefix **FLNR** or **FLSR** followed by desired ampere rating.

Ampere Rating	Pkg. Qty.	Price Each
FLNR SERIES (250 V)		
1/10, 1/8, 1 1/100, 3/10, 1/4, 3/10, 1/2	10	\$ 5.91
1 1/8, 1 1/10, 1 1/10, 2 1/4	10	5.91
1/2, 3/10, 1 1/10	10	4.37
3/10, 1 1/4, 1 1/2, 2 1/10	10	5.11
1, 2, 2 1/2	10	3.81
3, 3 3/10, 4, 5, 6, 6 1/4	10	3.53
8, 10, 12	10	3.53
3 1/2, 4 1/2, 7, 9	10	4.04
5 1/10	10	4.64
7 1/2	10	5.25
15, 20, 25, 30	10	2.84
17 1/2	10	3.27
35, 40, 45, 50, 60	10	5.27
70, 80, 90, 100	5	11.73
110	1	29.47
125, 150, 175, 200	1	26.01
225, 250, 300, 400	1	46.81
350	1	53.37
450	1	95.83
500	1	81.61
600	1	71.62

FLSR SERIES (600 V)		
1/10, 1 1/100, 3/10, 1/4, 3/10, 1/2	10	\$11.79
1 1/8, 1 1/10, 1 1/10, 2 1/4	10	10.25
1, 1 1/10, 2, 2 1/2, 2 1/10	10	7.73
1 1/4, 1 1/2, 1 1/10, 2 1/4	10	8.73
3, 3 3/10, 3 1/2, 4, 5	10	7.13
6, 6 1/4, 7, 8, 9, 10, 12	10	7.13
4 1/2, 5 1/10	10	8.20
7 1/2	10	9.52
15, 17 1/2, 20, 25, 30	10	6.36
35, 40, 45, 50, 60	10	10.96
70, 80, 90, 100	5	22.56
110, 125, 150, 175, 200	1	45.14
225, 250, 300, 350, 400	1	90.40
450	1	.....
500, 600	1	.....

LLNRK SERIES (250 V) & LLSRK SERIES (600 V) GENERAL PURPOSE FUSES



All-purpose, universal, current-limiting fuses that limit available fault currents to very low peak let-thru levels and still have the time delay required for motor starting surges. Applications include protection of circuit breakers, switches, panels and general distribution systems. **UL Listed per 198.E, Class RK-1. Voltage:** LLNRK 250 VAC or less; LLSRK, 600 VAC or less. **Interrupting Rating:** 200,000 amperes AC. **Test Specifications:** 110%; 4 hrs., min, 135%: 1 hr. (0-60 A), 2 hrs., (70-600 A), 200%; 2 min., (0-30 A), 4 min., (31-60 A) 6 min. (61-100 A), 8 min., (101-200 A), 10 min., (201-400 A), 12 min., (401-600 A), 500%; 10 sec., min. To order, use Series Prefix **LLNRK** or **LLSRK** followed by desired rating.

Ampere Rating	Pkg. Qty.	Price Each
LLNRK SERIES (250 V)		
1/10, 1 1/100, 3/10, 1/4, 3/10	10	\$10.47
1 1/8, 1 1/10, 1 1/10, 2 1/4	10	10.47
1/2, 3/10, 1 1/10, 3 1/2, 4 1/2, 9	10	7.86
3/10, 1 1/4, 2 1/10, 5 1/10, 7	10	9.16
1, 2, 2 1/2, 3, 3 3/10, 4	10	6.85
5, 6, 6 1/4, 10, 12	10	6.85
15, 20, 25, 30	10	6.36
17 1/2	10	7.22
35, 40, 45, 50, 60	10	14.86
70, 80, 90, 100	5	34.59
110	1	81.75
125, 150, 175, 200	1	71.83
225, 250, 300, 400	1	.....
350	1	.....
450	1	.....
500	1	.....
600	1	.....

LLSRK SERIES (600 V)		
1, 2 1/2, 2 1/10, 3, 3 3/10	10	\$ 9.48
3 1/2, 4, 5, 6, 6 1/4, 7	10	9.48
8, 9, 10, 12	10	9.48
1 1/8, 1 1/10, 1 1/10, 1 1/10	10	12.62
2, 2 1/4	10	12.62
1 1/4, 4 1/2, 5 1/10	10	10.80
15, 17 1/2, 20, 25, 30	10	8.88
35, 40, 45, 50, 60	10	18.86
70, 80, 90, 100	5	42.70
110, 125, 150, 175, 200	1	85.51
225, 250, 300, 350, 400	1	.....
450	1	.....
500, 600	1	.....

NLN SERIES (250 V) & NLS SERIES (600 V) "ONE-TIME" FUSES



Class K5 (replaces Class H) fuses, for use in applications with up to 50,000 amperes available current. Applications include low-cost circuit protection for use in lighting, heating and other non-transient circuits. **NLN Series UL Listed per 198D. Class H, NLS Series UL Listed per 198D. Class K5 from 35 to 600 amperes. Voltage:** NLN Series, 250 VAC or less; NLS Series, 600 VAC or less. **Test Specifications:** 100%, 4 hrs. min; 135%: 1 hr. (0-60 amperes) or 2 hrs. (70-600 amperes); 200%, 2 minutes (0-30 amperes) 4 minutes (31-60 amperes), 6 minutes (61-100 amperes), 8 minutes (101-200 amperes), 10 minutes (201-400 amperes) or 12 minutes (401-600 amperes). To order, use Series Prefix **NLN** or **NLS** followed by desired ampere rating.

Ampere Rating	Pkg. Qty.	Price Each
NLN SERIES (250 V)		
1, 3, 5, 6, 10	10	\$ 1.10
2, 4, 7, 8, 12	10	.97
15, 20	10	1.58
25	10	.88
30	10	1.06
35, 45, 50	10	.95
40, 60	10	1.65
70	5	1.42
80	5	6.98
90	5	8.21
100	5	9.44
110	1	6.16
125, 150	1	20.83
175	1	16.92
200	1	22.92
225	1	14.96
250, 300	1	40.59
350	1	35.36
400	1	40.59
450, 500	1	61.27
600	1	53.33

NLS SERIES (600 V)		
1, 2, 4, 7, 8, 12	10	\$ 6.54
3, 5	10	5.71
10	10	4.80
15, 30	10	4.11
20	10	4.11
25	10	4.69
35, 45	10	8.21
40, 50	10	6.98
60	10	5.16
70, 80	5	17.26
90	5	19.91
100	5	12.99
110	1	39.41
125, 150	1	34.27
175	1	39.24
200	1	29.24
225, 250, 350	1	78.56
300, 400	1	68.45
450, 500	1	.....
600	1	98.55

THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS
WE HAVE AVAILABLE. PLEASE
CONTACT US FOR ADDITIONAL PRODUCT INFORMATION.

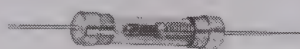
2AG SLO-BLO® TYPE

APPROVALS: Listed by Underwriters Laboratories and certified by CSA through 3.5 amperes. Recognized under the Components Program of Underwriters Laboratories from 4 through 7 amperes.



CARTRIDGE TYPE (.177" DIA. × .58")

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
229.250	1/4	5	\$0.46
229.375	3/8	5	0.46
229.500	1/2	5	0.46
229.750	3/4	5	0.46
229001	1	5	0.46
22901.5	1 1/2	5	0.46
229002	2	5	0.46
22902.5	2 1/2	5	0.46
229003	3	5	0.46
22903.5	3 1/2	5	0.46
229004	4	5	0.46
229005	5	5	0.46
229007	7	5	0.46

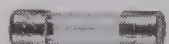


AXIAL LEAD TYPE (.19" DIA. × .60")

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
230.250	1/4	5	\$0.76
230.375	3/8	5	0.76
230.500	1/2	5	0.76
230.750	3/4	5	0.76
230001	1	5	0.76
23001.5	1 1/2	5	0.76
230002	2	5	0.76
23002.5	2 1/2	5	0.76
230003	3	5	0.76
23003.5	3 1/2	5	0.76
230004	4	2	0.76
230005	5	2	0.76
230007	7	2	0.76

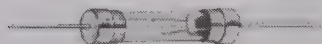
2AG FAST-ACTING TYPE

APPROVALS: Listed by Underwriters Laboratories and certified by CSA.



CARTRIDGE TYPE (.177" DIA. × .58")

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
225.100	1/10	5	\$0.86
225.125	1/8	5	0.86
225.250	1/4	5	0.86
225.375	3/8	5	0.86
225.500	1/2	5	0.34
225.750	3/4	5	0.34
225001	1	5	0.34
22501.5	1 1/2	5	0.34
225002	2	5	0.34
22502.5	2 1/2	5	0.34
225003	3	5	0.34
22503.5	3 1/2	5	0.34
225004	4	5	0.34
225005	5	5	0.34
225007	7	5	0.34
225008	8	5	0.34
225010	10	5	0.34



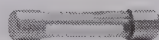
AXIAL LEAD TYPE (.19" DIA. × .60")

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
224.100	1/10	5	\$1.09
224.125	1/8	5	1.09
224.250	1/4	5	1.09
224.375	3/8	5	1.09

2AG FAST-ACTING TYPE (CONT'D)

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
224.500	1/2	5	\$0.55
224.750	3/4	5	0.55
224001	1	5	0.55
22401.5	1 1/2	5	0.55
224002	2	5	0.55
22402.5	2 1/2	5	0.55
224003	3	5	0.55
22403.5	3 1/2	5	0.55
224004	4	5	0.55
224005	5	5	0.55
224007	7	5	0.55
224008	8	5	0.41
224010	10	5	0.41

5 × 20 MM SLO-BLO® TYPE



Diameter: 5mm (0.197"). Length: 20mm (0.787").

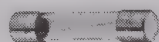
ELECTRICAL CHARACTERISTICS

% of Ampere Rating	Opening Time
110%	4 hours, Minimum
135%	1 hour, Maximum
200%	5 seconds, Minimum

APPROVALS: Listed by Underwriters Laboratories and Certified by CSA.

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
239.250	1/4	5	\$0.73
239.300	3/10	5	0.73
239.400	4/10	5	0.73
239.500	1/2	5	0.73
239.600	5/10	5	0.73
239.700	7/10	5	0.73
239.800	8/10	5	0.73
239001	1	5	0.73
2391.25	1 1/4	5	0.73
23901.6	1 5/10	5	0.73
239002	2	5	0.73
23902.5	2 1/2	5	0.73
239003	3	5	0.73
239004	4	5	0.73

5 × 20 MM FAST-ACTING TYPE



Diameter: 5mm (0.197"). Length: 20mm (0.787").

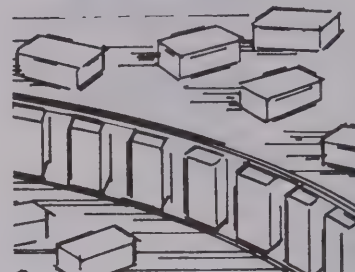
ELECTRICAL CHARACTERISTICS

% of Ampere Rating	Opening Time
110%	4 hours, Minimum
135%	1 hour, Maximum
200%	5 seconds, Maximum

APPROVALS: Listed by Underwriters Laboratories and Certified by CSA.

Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
235.100	1/10	5	\$0.69
235.125	1/8	5	0.69
235.200	2/10	5	0.69
235.250	1/4	5	0.69
235.300	3/10	5	0.69
235.400	4/10	5	0.69
235.500	1/2	5	0.36
235.600	5/10	5	0.36
235.700	7/10	5	0.36
235.800	8/10	5	0.36
235001	1	5	0.31
2351.25	1 1/4	5	0.31
23501.6	1 5/10	5	0.31
235002	2	5	0.31
23502.5	2 1/2	5	0.31
235003	3	5	0.31
235004	4	5	0.31
235005	5	5	0.31
235006	6	5	0.31

PICO® SMF—CHIP TYPE



ELECTRICAL CHARACTERISTICS

% of Ampere Rating	Very Fast-Acting Opening Time	Slo-Blo® Opening Time
100%	4 hours Min.	4 hours, Min.
200%	1 second, Max.	1 sec. Min. 60 sec. Max.
300%	0.1 sec. Max.	0.2 sec. Min. 3 sec. Max.
800%	.....	0.02 sec. Min. 0.1 sec. Max.

Size: .285" L × .170" W × .118" H

Approvals:

Recognized under the Components Program of Underwriters Laboratories and Certified by CSA.

Interrupting Rating:

Very Fast-Acting: 50 Amperes at 125VAC and 300 Amperes at 125VDC. Slo-Blo®: 50 Amperes at 125VAC and DC.

Operating Temperature:

–55°C to +125°C

Materials:

Body—Molded Thermoplastic
Terminals—Solder Coated Copper

Soldering Methods: Infrared Reflow 428°F (220°C) Maximum temperature. Thru the Wave Soldering, 500°F (260°C), 3 seconds Maximum.

Color Coding:

Red ink marking indicates Very Fast-Acting. Blue ink marking indicates Slo-Blo®.

Packaging:

Fuses supplied on 12mm tape. 500 fuses per reel for use with automatic placement equipment per EIA Standard 481.

SLO-BLO®

Mfr. No.	Amp Rating	Voltage Rating	Price Each
R460.500	1/2	125V	\$1.24
R460.750	3/4	125V	1.24
R460001	1	125V	1.24
R46001.5	1 1/2	125V	1.24
R460002	2	125V	1.24
R460003	3	125V	1.24
R46003.5	3 1/2	125V	1.24
R460004	4	125V	1.24
R460005	5	125V	1.24

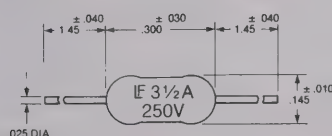
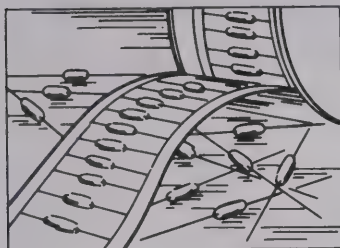
VERY FAST-ACTING

Mfr. No.	Amp Rating	Voltage Rating	Price Each
R459.062	1/16	125V	\$1.17
R459.125	1/8	125V	.992
R459.250	1/4	125V	.899
R459.375	3/8	125V	.899
R459.500	1/2	125V	.899
R459.750	3/4	125V	.899
R459001	1	125V	.899
R45901.5	1 1/2	125V	.899
R459002	2	125V	.899
R459003	3	125V	.899
R45903.5	3 1/2	125V	.899
R459004	4	125V	.899
R459005	5	125V	.899

263 SERIES

PICO® II VERY FAST ACTING (250 V)

Ideal for applications where a 250 voltage rating is required. Smallest available today with .300" L x .145" D with 1.45" leads. Encapsulated epoxy coated body. **Blow Time:** 100% 4 hours min., 200% 1 second max., 300% 0.1 second max. **UL Recognized. CSA Certified.**

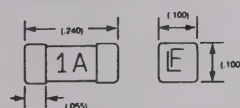
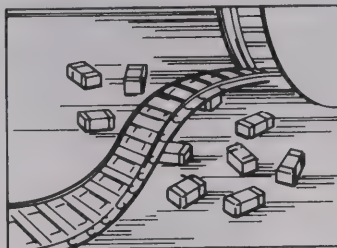


Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
263.062	1/16	5	\$1.52
263.125	1/8	5	1.19
263.250	1/4	5	1.19
263.375	3/8	5	1.19
263.500	1/2	5	1.19
263.750	3/4	5	.97
263001	1	5	.97
263001.5	1 1/2	5	.97
263002	2	5	.97
263002.5	2 1/2	5	.97
263003	3	5	.97
263003.5	3 1/2	5	.97
263004	4	5	.97
263005	5	5	.97

451 SERIES

NANO²™ SMF VERY FAST ACTING (125 V OR LESS)

The compact subminiature size is ideal for surface mount applications. .240" L x .100" square. Replaces 271 Series NANOfuse. **Blow Time:** 100% 4 hours min., 200% 5 seconds max., (-10 amps), 20 seconds max., (12-15 amps). **UL Recognized. CSA Certified.**

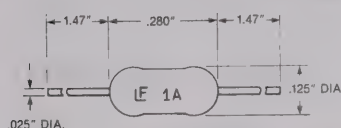


Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
451.062	1/16	5	Pricing on Request
451.125	1/8	5	
451.250	1/4	5	
451.375	3/8	5	
451.500	1/2	5	
451.750	3/4	5	
451001	1	5	
451001.5	1 1/2	5	
451002	2	5	
451002.5	2 1/2	5	
451003	3	5	
451003.5	3 1/2	5	
451004	4	5	
451005	5	5	
451007	7	5	
451010	10	5	
451012	12	5	
451015	15	5	

473 SERIES

PICO® II SLO-BLO® PICO FUSE (125 V OR LESS)

Ideal for design applications having in-rush currents that normally open a fast acting fuse. .280" L x .125" D with 1.47" leads. Encapsulated epoxy-coated body. **Blow Time:** 100% 4 hours min., 200% 1 second min., 60 seconds max., 300% 0.2 seconds min., 3 seconds max. **UL Recognized. CSA Certified.**



Mfr. No.	Amp Rating	Pkg. Qty.	Price Each
473.500	1/2	5	\$1.35
473.750	3/4	5	1.35
473001	1	5	1.35
473001.5	1 1/2	5	1.35
473002	2	5	1.35
473002.5	2 1/2	5	1.35
473003	3	5	1.35
473003.5	3 1/2	5	1.35
473004	4	5	1.35
473005	5	5	1.35
473007	7	5	1.35

**THIS MANUFACTURER HAS ACHIEVED
ISO 9000 QUALITY SYSTEMS STANDARDS.**

**PRICES SHOWN ARE FOR REFERENCE ONLY. PLEASE CALL
US FOR CURRENT QUOTES.**

CARTRIDGE FUSES TO SPECIFICATION MIL-F-15160

MILITARY DESIGNATION FO1A250V	
Ampere Rating	Price Each
1/200	\$4.03
1/100	3.72
1/50	3.44
1/25	1.77
1/10, 1/8, 3/16, 1/4	.822
1/4, 3/8, 1/2, 3/4, 1	.505
5/16, 1, 1 1/4, 1 1/2, 1 3/4	.295
2, 2 1/2	.295
3, 3 1/2, 4, 5	.307

MILITARY DESIGNATION FO2A250V	
Ampere Rating	Price Each
1/100, 1/50	\$3.16
1/16, 1/8, 1/4, 1/2	.902
.075, 3/16, 1/4	.902
1/4, 3/8, 1/2	.558
1/2, 3/4, 1	.403
1, 1 1/4, 1 1/2, 1 3/4	.245
2, 2 1/2, 3	.245
4, 5, 6, 7	.397
8, 10, 15	.539

MILITARY DESIGNATION FO2B250V	
Ampere Rating	Price Each
1/100, 1/50, 1/25, 1/10	\$1.81
1/16, 1/8, 1/4, 1/2	1.44
3/16, 1/4, 1/2	1.44
1/4, 3/8, 1/2, 3/4, 1	.868
1/2, 3/4, 1, 1 1/4	.868
1 1/4, 1 1/2, 1 3/4, 2	.629
2 1/2, 2 3/4, 3, 3 1/4	.629

MILITARY DESIGNATION FO3A250V	
Ampere Rating	Price Each
1/4, 1/2	\$0.688
1, 1 1/2, 2, 3, 4	.645
5, 6, 8, 10, 12, 15	.611
20, 25, 30	.911

MILITARY DESIGNATION FO3B250V	
Ampere Rating	Price Each
1/100	\$2.09
1/50, 1/25	1.58
1/10, 1/8, 1/4	1.42
3/16, 1/4	1.89
1/4, 3/8, 1/2, 3/4	1.42
3/4, 1, 1 1/4, 1 1/2	1.42
1 3/4, 2	1.42
2 1/2, 2 3/4, 3, 3 1/4, 4	1.91
5, 6 1/4, 7, 8, 10	1.91
15, 20, 25	1.91

Note: Fuses have nickel plated caps; for silver plated caps, add suffix **S** to part number. Small additional charge.

MICRO™ FUSES TO MILITARY SPECIFICATION MIL-F-23419/2

Type Designation MIL-F-23419/2	Nearest Comm. Equiv.	Littelfuse Catalog No.	Price Each
FM02 125V 2MA (1/500A)	273000 Series	274.002	\$7.78
FM02 125V 5MA (1/200A)		274.005	7.78
FM02 125V 10MA (1/100A)		274.010	7.78
FM02 125V 15MA (1/64A)		274.015	7.78
FM02 125V 13MA (1/32A)		274.031	7.78
FM02 125V 62MA (1/16A)		274.062	3.72
FM02 125V 1/10A		274.100	3.72
FM02 125V 1/8A		274.125	3.72
FM02 125V 1/4A		274.200	3.72
FM02 125V 1/2A		274.250	3.72
FM02 125V 3/4A		274.300	3.72

Type Designation MIL-F-23419/2	Nearest Comm. Equiv.	Littelfuse Catalog No.	Price Each
FM02 125V 1/10A	273000 Series	274.400	\$3.72
FM02 125V 1/8A		274.500	3.72
FM02 125V 1/4A		274.600	3.72
FM02 125V 3/4A		274.750	3.72
FM02 125V 1A		274001	3.72
FM02 125V 1 1/2A		274015	3.72
FM02 125V 2A		274002	3.72
FM02 125V 3A		274003	3.72
FM02 125V 4A		274004	3.72
FM02 125V 5A		274005	3.72

PICO® FUSES TO MILITARY SPECIFICATION MIL-F-23419/4

Type Designation MIL-F-23419/4	V Rating	Nearest Comm. Equiv.	Littelfuse Catalog No.	Price Each
FM04 1/4A	125V	275000 Series	277.125	\$2.45
FM04 1/4A	125V		277.250	2.23
FM04 1/2A	125V		277.500	2.23

Type Designation MIL-F-23419/4	V Rating	Nearest Comm. Equiv.	Littelfuse Catalog No.	Price Each
FM04 3/4A	125V		277.750	\$2.00
FM04 10A	125V		277010	2.00
FM04 15A	32V		277015	2.36

FUSEHOLDERS TO MILITARY SPECIFICATION MIL-F-19207

Type Designation MIL-F-19207	Nearest Catalog No.	Price Each
FHL 17G2	349250	\$12.00
FHL 18G2-1	349012	16.74
FHL 18G2-2	349023	16.74
FHL 18G2-3	349034	16.74
FHL 18G2-4	349046	16.74
FHL 18G2-5	349061	16.74
FHL 18G2-6	349081	16.74
FHL 18G2-7	349002	16.74
FHL 18G2-8	349005	16.74
FHL 18G2-9	349008	16.74
FHL 44LG-1	284007	16.24

Suffix **W** to type designation indicates watertight; suffix **G**, drip-proof.

Type Designation MIL-F-19207	Nearest Catalog No.	Price Each
FHL 44G-2	284008	\$16.24
FHL 44G-3	284009	16.24
FHL 44G-4	284010	15.97
FHL 44G-5	284011	15.97
FHL 44G-6	284012	15.97
FHL 45G	284013	11.13
FHN 20G	342025	4.90
FHN 26G-2	342024	4.62
FHN 26W	342021	21.55
FHN 55W	340267	21.02

**THIS MANUFACTURER HAS ACHIEVED
ISO 9000 QUALITY SYSTEMS STANDARDS.**



ALARM INDICATING FUSES



For telecommunications and similar applications. Color-coded indicating flag can also activate alarm circuit. Multiple panel mounting in limited space. Plug-in type. **UL Recognized** at 60 VDC 125 VAC. **Blow Time:** 100%, 10 minutes min.; 150%, 5 minutes max.

Mfr. No.	Ampere Rating	Color Code	Price Each
401.180	1 ⁸⁵ / ₁₀₀	Yellow	\$1.86
401.250	1/4	Violet	1.86
401.500	1/2	Red	1.86
401.650	⁶⁵ / ₁₀₀	Black	1.86
401.750	3/4	Brown	1.86
401001	1	Gray	1.86
4011.33	1 1/5	White	1.86
40101.5	1 1/2	Yellow/White	1.86
401002	2	Orange	1.86
401003	3	Blue	1.86
40103.5	3 1/2	Blue/White	1.86
401004	4	Brown/White	1.86
401005	5	Green	1.86
40107.5	7 1/2	Black/White	1.86
401010	10	Red/White	1.86

OMNI-BLOK® FUSE BLOCKS FOR 3AG FUSES



Low cost, low-profile fuse blocks with break-away pole feature. Multiple-pole units may be broken apart, as needed, to obtain the desired number of poles. Available in 1 through 12 pole units. **UL Recognized** and **CSA Certified** up to 300 V. **Standard Color:** Gray; other colors available on special order.

Mfr. No.	Description	Price Each
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WITH SOLDER TERMINALS 30 A, 300 V

354001-GY	1 pole	\$0.63
354002-GY	2 pole	1.23
354012-GY	12 pole	7.25

WITH 3/16" Q.C. TERMINALS 20 A, 300 V

354601-GY	1 pole	\$0.63
354602-GY	2 pole	1.23
354612-GY	12 pole	7.25

WITH 1/4" Q.C. TERMINALS 30 A, 300 V (25A CSA)

354901-GY	1 pole	\$0.63
354902-GY	2 pole	1.23
354912-GY	12 pole	7.25

WITH PC BOARD TERMINALS 15 A, 300 V

354101-GY	1 pole	\$0.63
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Note: For pricing on 4-11 pole units, contact us.

3 AG FUSEBLOCKS WITH SCREW TERMINALS—TYPE T



Clips: Nickel plated spring brass. **UL Recognized.**

Mfr. No.	Description	Price Each
356001	1 pole	\$ 2.35
356002	2 pole	4.99
356012	12 pole	28.24

Note: Contact us for price and availability of fuseblocks with silver plated beryllium copper clips (359 000 series).

3AG FUSEBLOCKS WITH 3/16" Q.C. TERMINALS



Clips: Nickel plated spring brass. **UL Recognized.**

Mfr. No.	Description	Price Each
350327	1 pole, molded base	\$2.14
350328	2 pole, molded base	3.67

3AG FUSEBLOCKS WITH 1/4" Q.C. TERMINALS—TYPE Q

Clips: Nickel plated spring brass. **UL Recognized.**

350329	1 pole, molded base	\$2.05
350330	2 pole, molded base	3.32

3AG FUSEBLOCKS WITH SOLDER TERMINALS



Clips: Tin plated spring brass. **UL Recognized.**

Mfr. No.	Description	Price Each
357001	1 pole, molded base	\$1.04
357002	2 pole, molded base	2.19

Note: Contact us for price and availability of fuseblocks with silver plated beryllium copper clips (350 200 series).

5AG MIDGET FUSEBLOCKS WITH SCREW TERMINALS

Clips: Silver plated beryllium copper. **UL Recognized.**

556001	1 pole	\$ 4.79
556002	2 pole	9.43
556012	12 pole	55.89

STANDARD FUSE CLIPS (SPRING BRASS NICKEL PLATED)



Mfr. No.	Type	Price Each
101001	Ear	\$0.11
101002	Earless	.15
101003*	Lug	.15
105001**	Ear	.23
105002**	Earless	.25

*Tin plated. **5AG.

STANDARD FUSE CLIPS (BERYLLIUM COPPER, SILVER PLATED)

Mfr. No.	Type	Price Each
121001	Ear	\$0.33
121002	Earless	.36
121004	Lug	.50
125001	Ear	.90
125002	Earless	.91

PC BOARD FUSE CLIPS FOR 1/4" DIAMETER FUSES



Spring brass clips. Tin plated.

Mfr. No.	Type	Price Each
102071	Ear	\$0.14
102074	Earless	.15

BOWED TAB PC BOARD CLIPS FOR 1/4" DIAMETER FUSES



Spring brass. Tin plated.

Mfr. No.	Type	Price Each
102078	Earless	\$0.17
102079	Ear	.17

PC BOARD CLIPS FOR 2AG AND/OR 5 MM DIAMETER FUSES



Spring brass. Tin plated.

Mfr. No.	Type	Price Each
100054	Ear-5 mm*	\$0.18
100056	Ear-5 mm	.15
111501	Ear-2AG or 5 mm	.15

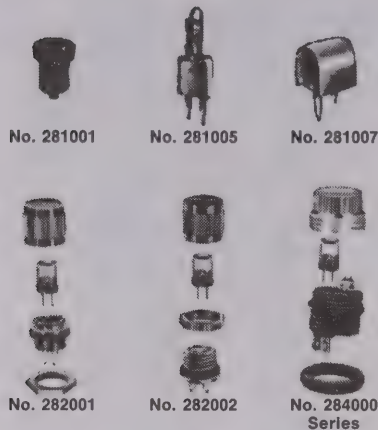
*Silver plated.

LOW PROFILE PC BOARD CLIPS FOR 1/4" DIAMETER FUSES



Mfr. No.	Type	Price Each
122090*	Silver-plated	\$0.36
102080**	Tin-plated	.15

*Beryllium copper. **Spring brass.



MICRO™ FUSE FUSEHOLDERS

Mfr. No.	Type	Price Each
281001	Chassis mount	\$ 1.13
281005	PC board*	1.48
281007	PC board*	1.40
282001	Front panel	6.95
282002	Rear panel	6.95
282007	Front Panel**	14.45
282008	Rear Panel**	14.45

* UL Recognized ** RFI Shielded

MICRO™ FUSE INDICATING FUSEHOLDERS

Mfr. No.	Voltage Range	Price Each
284004	2½-7 V	\$10.41
284005	7-16 V	10.41
284006	16-32 V	10.41
284003	100-125 V	10.41

3AG INDICATING FUSEHOLDERS 344(000) SERIES

For visual indication of a blown fuse. Incandescent or neon lamps. Supplied with resistor and hardware. Rated at 20 amps to 250 volts. **Recognized under the Components Program of UL and Certified by CSA.**

Mfr. No.	Voltage	Price Each
344006	2½-7 V*	\$14.22
344012	7-16 V*	14.22
344024	16-32 V*	14.22
344125	100-125 V	10.01
344250	200-250 V	10.01

* Incandescent

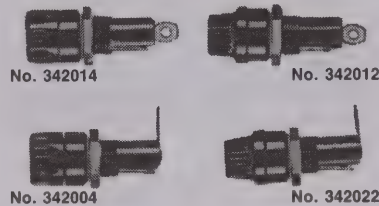
3AG INDICATING FUSEHOLDERS 344(400) SERIES

Same as 344(000) Series but with different lens style. **Recognized under the Components Program of UL and Certified by CSA.**

Mfr. No.	Voltage	Price Each
344401	2½-7 V*	\$14.22
344402	7-16 V*	14.22
344403	16-32 V*	14.22
344404	100-125 V	9.82
344405	200-250 V	9.82

* Incandescent

3AG STANDARD FUSEHOLDERS



3AG MINIATURE FUSEHOLDERS

Extend only 1" behind panel. All holders include hardware. Rated at 20 amps to 250 volts. **UL Recognized and CSA Certified.**

Mfr. No.	Type	Price Each
342004	Fluted knob, right angle terminals	\$1.93
342014	Fluted knob, straight terminals	1.93
342022	Knurled knob, right angle terminals	1.93
342012	Knurled knob, straight terminals	1.93

For drip-proof applications, order part number with suffix P, for example, 342004P.

3AG MINIATURE QUICK-CONNECT FUSEHOLDERS WITH ¼" TERMINALS

Identical to 3AG Miniature Fuseholders above, but with Q.C. terminals. Rated at 20 amps to 250 volts. **UL Recognized and Certified by CSA.** All holders include hardware.

Mfr. No.	Type	Price Each
342028	Fluted knob, right angle terminals	\$2.16
342038	Fluted knob, straight terminals	2.16
342048	Knurled knob, right angle terminals	2.16
342058	Knurled knob, straight terminals	2.16

Note: For fuseholders with ¼" Q.C. terminals, use 342 800 Series. Example: 342828.

3AG PANEL FUSEHOLDERS

All holders include hardware.

Mfr. No.	Type	Price Each
340312	RF shld'd FHN55W	\$20.46
342006†	Watertight	20.46

†UL Recognized 20 amps to 250 volts.

MIL. SPEC. FUSES AND FUSEHOLDERS ARE ALSO AVAILABLE FROM LITTELFUSE. CONTACT DISTRIBUTOR FOR SPECIFICS.



3AG Indicating Fuseholder



3AG Low Profile Fuseholder



3AG Indicating Low Profile

3AG LOW PROFILE FUSEHOLDERS

Square cap fuseholders snap into chassis, eliminating need for mounting hardware. Caps snap open for quick, easy insertion and removal of fuses. Aesthetically styled to complement modern instrument panels. **UL Recognized; CSA Certified.** 15 amps to 250 volts. Order body and cap assemblies separately.

LOW PROFILE BODY ASSEMBLIES

Mfr. No.	Bezel Color	Price Each
348610	Red	\$2.25
348620	Green	2.25
348630	Yellow	2.25
348640	Blue	2.25
348650	White	2.25
348670	Black	2.25
348690	Gray	2.25

For ¼" Q.C. terminals, change the 6 to 8; example: 348810.

LOW PROFILE CAPS

Mfr. No.	Color	Price Each
348001	Red	\$0.75
348002	Green	0.75
348003	Yellow	0.75
348004	Blue	0.75
348005	White	0.75
348007	Black	0.75
348009	Gray	0.75

INDICATING LOW PROFILE FUSEHOLDERS

Similar to above, except holders are supplied with an indicating lamp that lights when the fuse blows. Standard body and bezel are black. Other bezel colors available to special order. Rated at 15 amps to maximum lamp voltage. To order with ¼" Q.C. terminals, change the 6 to 8; example, 344801.

Mfr. No.	Lamp		Resistor	Lens Color
	Volts	Amps		

INCANDESCENT

344601	6	40	No	Amber
344602	14	30	No	Amber
344603	28	40	No	Amber

NEON

344604	125	1.2	Yes	Clear
344605	250	.3	Yes	Clear

Mfr. No.	Price Each
344601-344603	\$9.36
344604-344605	6.99



REAR MOUNT/FINGER GRIP KNOB

Mfr. No.	Bottom Terminal	Price Each
FOR 2AG FUSES (.177" × .570")		
3452RF1	Right Angle Solder	\$2.28
3452RF2	Straight Solder	2.28
3452RF3	3/16" Right Angle QC	2.28
3452RF4	3/16" Straight QC	2.28
3452RF7	1/4" Right Angle QC	2.41
3452RF8	1/4" Straight QC	2.41
FOR 3AG FUSES (.250" × 1.250")		
3453RF1	Right Angle Solder	\$1.93
3453RF2	Straight Solder	1.93
3453RF3	3/16" Right Angle QC	1.93
3453RF4	3/16" Straight QC	1.93
3453RF7	1/4" Right Angle QC	2.05
3453RF8	1/4" Straight QC	2.05
FOR 5 × 20 mm FUSES (.197" × .787")		
3455RF1	Right Angle Solder	\$2.19
3455RF2	Straight Solder	2.19
3455RF3	3/16" Right Angle QC	2.19
3455RF4	3/16" Straight QC	2.19
3455RF7	1/4" Right Angle QC	2.30
3455RF8	1/4" Straight QC	2.30

P.C. BOARD MOUNT SCREWDRIVER SLOT



Mfr. No.	Terminal	Price Each
FOR 3AG FUSES		
345101	P.C.	\$2.19
FOR 5 × 20 MM FUSES		
345121	P.C.	\$2.76

FLIP-TOP FUSEHOLDERS FOR 3AG FUSES



Shock-safe design eliminates any possibility of electrical shock, per IEC Standards 257 and 65. Spring-loaded fuse carrier holds spare fuse for fast, easy fuse replacement and is permanently attached to fuseholder body to prevent loss. Low profile design complements modern panels. Snap-in mounting; no hardware required. Combination solder 1/4" Q.C. terminals. **Recognized under the Components Program of Underwriters Laboratories and Certified by CSA (10A, 250V).**

L.F. No. 346877—Price Each.....\$2.07

FLIP-TOP FUSEHOLDER FOR 2AG FUSES

Similar to L.F. No. 346877 (above) except for 2AG fuses.

L.F. No. 286377—Price Each.....\$1.74

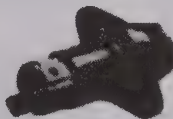
BAKELITE® UNIVERSAL IN-LINE FUSEHOLDER



Comes with 15" wire loop and three different length springs for use with fuse sizes SFE 7½, 9, 14 and 20 and all 3AG fuses. (Fuses not included with holder.)

L.F. No. 150145—Price Each.....\$2.35

PANEL FUSEHOLDER



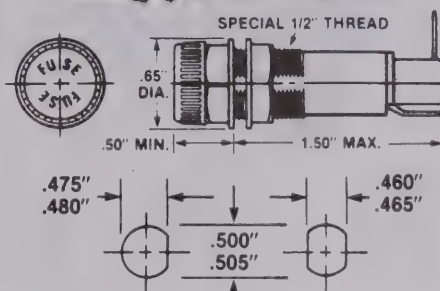
Versatile fuseholder, designed for use with 1/2" dia. fuses with lengths between 1 1/8" and 1 1/2", including the popular 5AG and Midget types. Rated at 30 amps up to 600 volts. 1/4" Q.C. solder terminals. **UL Recognized, CSA Certified.**

Mfr. No.	Fuse Length Range (in.)	Price Each
STANDARD		
571007	1 1/2-1 1/2	\$6.28
571027	1 1/8-1 1/8	6.28
WATERTIGHT		
571007P	1 1/2-1 1/2	\$7.69
571027P	1 1/8-1 1/8	7.69



BAKELITE® IN-LINE FUSEHOLDERS

Mfr. No.	For Fuse Size	Price Each
WITHOUT FUSE AND WIRE		
155004U	1/4" × 5/8"	\$0.998
155006U	1/4" × 3/4"	.998
15507.5U	1/4" × 7/8"	.998
155009U	1/4" × 7/8"	.998
155014U	1/4" × 1 1/8"	.998
155020U	1/4" × 1 1/4"	.998
WITH FUSE INSTALLED (19" WIRE LOOP)		
155004A	SFE 4	\$2.19
155006A	SFE 6	2.19
15507.5A	SFE 7.5	2.19
155009A	SFE 9	2.19
155014A	SFE 14	2.19
155020A	SFE 20	2.19



Suggested mounting holes

NYLON UNIVERSAL IN-LINE FUSEHOLDERS



Low-cost holder with "twist-lock". Comes with 8" lead and two springs to accommodate any 1/4" diameter fuse.

L.F. No. 155100—Price Each.....\$1.53

NYLON IN-LINE FUSEHOLDERS

Assembled with fuse and 19" loop of 14 AWG wire. Unassembled holders, without fuse or wire loop available; pricing on request.

Mfr. No.	Ampere Fuse	Price Each
155104A	SFE 4	\$2.02
155106A	SFE 6	2.02
15517.5A	SFE 7.5	2.02
155109A	SFE 9	2.02
155114A	SFE 14	2.02
155120A	SFE 20	2.02

ATO® IN-LINE FUSEHOLDERS



Assembled with 8" wire loop and ATO fuse. Snap lock installation into panel. Fuse holders without fuse or wire loop and without fuse but with 8" wire loop also available; information and pricing on request.

Mfr. No.	Ampere Rating	Price Each
155303A	3	\$1.48
155304A	4	1.48
155305A	5	1.48
15537.5A	7.5	1.48
155310A	10	1.48
155315A	15	1.48
155320A	20	1.48
155425A	25	1.48
155430A	30	1.48

**THIS MANUFACTURER HAS ACHIEVED
ISO 9000 QUALITY SYSTEMS STANDARDS.**

3AG/5 × 20MM SHOCK-SAFE FUSEHOLDERS

Conform to international standards—IEC Specifications 65 and 257. Assure acceptance in worldwide markets. Designed to eliminate any possibility of electrical shock. Bodies will accept 2AG, 3AG or 5 × 20 mm fuses with use of appropriate knobs. Terminals accept solder or female QC connectors. QC terminals are NEMA style. Holders available with straight bottom or right-angle terminals. Rated at 20 amperes, 300 volts max. **UL Recognized; CSA Certified; SEMKO approved (6.3A, 250V); VDE approved (10A, 250V).** Bodies and knobs also available separately. **Contact us for pricing information.**

LOW PROFILE BODY/SCREWDRIVER SLOT KNOB

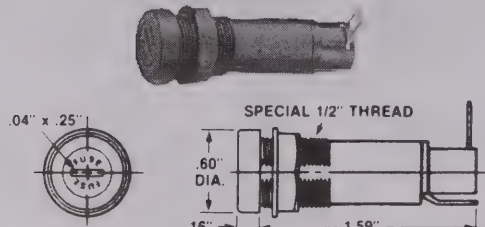


Diagram showing a side view and a top view of the Low Profile Body/Screwdriver Slot Knob. The side view shows a body with a diameter of .60" DIA. and a length of 1.59". The top view shows a circular base with a diameter of .04" x .25". The body has a SPECIAL 1/2" THREAD and a length of .60" DIA. The bottom terminal is .16" wide.

Mfr. No.	Bottom Terminal	Price Each
FOR 2AG FUSES (.177" × .570")		
3452LS1	Right Angle Solder	\$2.18
3452LS2	Straight Solder	2.18
3452LS3	3/16" Right Angle QC	2.18
3452LS4	3/16" Straight QC	2.18
3452LS7	1/4" Right Angle QC	2.28
3452LS8	1/4" Straight QC	2.28
FOR 3AG FUSES (.250" × 1.250")		
3453LS1	Right Angle Solder	\$1.83
3453LS2	Straight Solder	1.83
3453LS3	3/16" Right Angle QC	1.83
3453LS4	3/16" Straight QC	1.83
3453LS7	1/4" Right Angle QC	1.93
3453LS8	1/4" Straight QC	1.93
FOR 5 × 20mm FUSES (.197" × .787")		
3455LS1	Right Angle Solder	\$2.07
3455LS2	Straight Solder	2.07
3455LS3	3/16" Right Angle QC	2.07
3455LS4	3/16" Straight QC	2.07
3455LS7	1/4" Right Angle QC	2.19
3455LS8	1/4" Straight QC	2.19

HIGH-PROFILE BODY/SCREWDRIVER SLOT KNOB

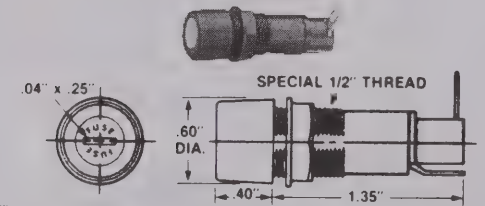


Diagram showing a side view and a top view of the High-Profile Body/Screwdriver Slot Knob. The side view shows a body with a diameter of .60" DIA. and a length of 1.35". The top view shows a circular base with a diameter of .04" x .25". The body has a SPECIAL 1/2" THREAD and a length of .60" DIA. The bottom terminal is .16" wide.

Mfr. No.	Bottom Terminal	Price Each
FOR 2AG FUSES (.177" × .570")		
3452HS1	Right Angle Solder	\$2.18
3452HS2	Straight Solder	2.18
3452HS3	3/16" Right Angle QC	2.18
3452HS4	3/16" Straight QC	2.18
3452HS7	1/4" Right Angle QC	2.28
3452HS8	1/4" Straight QC	2.28
FOR 3AG FUSES (.250" × 1.250")		
3453HS1	Right Angle Solder	\$1.83
3453HS2	Straight Solder	1.83
3453HS3	3/16" Right Angle QC	1.83
3453HS4	3/16" Straight QC	1.83
3453HS7	1/4" Right Angle QC	1.93
3453HS8	1/4" Straight QC	1.93
FOR 5 × 20mm FUSES (.197" × .787")		
3455HS1	Right Angle Solder	\$2.07
3455HS2	Straight Solder	2.07
3455HS3	3/16" Right Angle QC	2.07
3455HS4	3/16" Straight QC	2.07
3455HS7	1/4" Right Angle QC	2.19
3455HS8	1/4" Straight QC	2.19

LOW PROFILE BODY/FINGER-GRIP KNOB

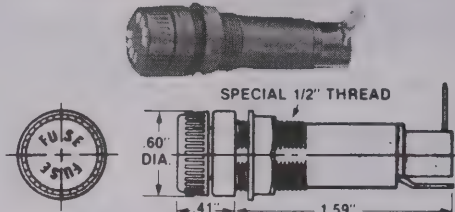


Diagram showing a side view and a top view of the Low Profile Body/Finger-Grip Knob. The side view shows a body with a diameter of .60" DIA. and a length of 1.59". The top view shows a circular base with a diameter of .04" x .25". The body has a SPECIAL 1/2" THREAD and a length of .60" DIA. The bottom terminal is .41" wide.

Mfr. No.	Bottom Terminal	Price Each
FOR 2AG FUSES (.177" × .570")		
3452LF1	Right Angle Solder	\$2.18
3452LF2	Straight Solder	2.18
3452LF3	3/16" Right Angle QC	2.18
3452LF4	3/16" Straight QC	2.18
3452LF7	1/4" Right Angle QC	2.28
3452LF8	1/4" Straight QC	2.28
FOR 3AG FUSES (.250" × 1.250")		
3453LF1	Right Angle Solder	\$1.83
3453LF2	Straight Solder	1.83
3453LF3	3/16" Right Angle QC	1.83
3453LF4	3/16" Straight QC	1.83
3453LF7	1/4" Right Angle QC	1.93
3453LF8	1/4" Straight QC	1.93
FOR 5 × 20mm FUSES (.197" × .787")		
3455LF1	Right Angle Solder	\$2.07
3455LF2	Straight Solder	2.07
3455LF3	3/16" Right Angle QC	2.07
3455LF4	3/16" Straight QC	2.07
3455LF7	1/4" Right Angle QC	2.19
3455LF8	1/4" Straight QC	2.19

QUICK-MOUNT LOW-PROFILE BODY/ SCREWDRIVER SLOT

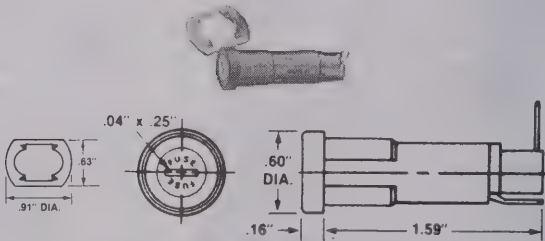
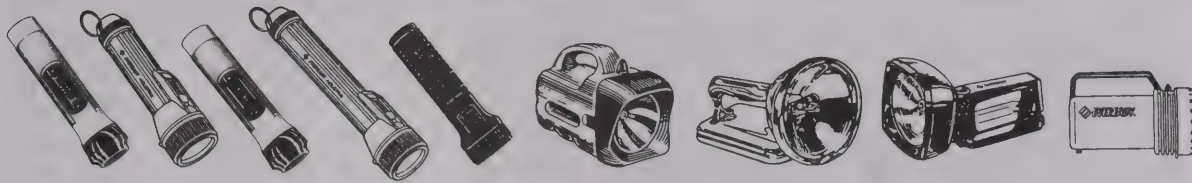


Diagram showing a side view and a top view of the Quick-Mount Low-Profile Body/Screwdriver Slot. The side view shows a body with a diameter of .60" DIA. and a length of 1.59". The top view shows a circular base with a diameter of .04" x .25". The body has a SPECIAL 1/2" THREAD and a length of .60" DIA. The bottom terminal is .16" wide.

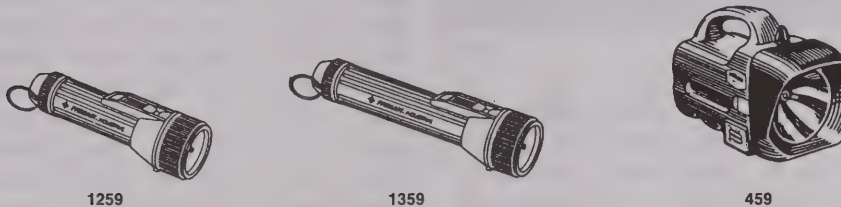
Mfr. No.	Bottom Terminal	Price Each
FOR 2AG FUSES (.177" × .570")		
3452QS1	Right Angle Solder	\$2.28
3452QS2	Straight Solder	2.28
3452QS3	3/16" Right Angle QC	2.28
3452QS4	3/16" Straight QC	2.28
3452QS7	1/4" Right Angle QC	2.41
3452QS8	1/4" Straight QC	2.41
FOR 3AG FUSES (.250" × 1.250")		
3453QS1	Right Angle Solder	\$1.93
3453QS2	Straight Solder	1.93
3453QS3	3/16" Right Angle QC	1.93
3453QS4	3/16" Straight QC	1.93
3453QS7	1/4" Right Angle QC	2.05
3453QS8	1/4" Straight QC	2.05
FOR 5 × 20mm FUSES (.197" × .787")		
3455QS1	Right Angle Solder	\$2.19
3455QS2	Straight Solder	2.19
3455QS3	3/16" Right Angle QC	2.19
3455QS4	3/16" Straight QC	2.19
3455QS7	1/4" Right Angle QC	2.30
3455QS8	1/4" Straight QC	2.30

EVEREADY® INDUSTRIAL LIGHTING PRODUCTS



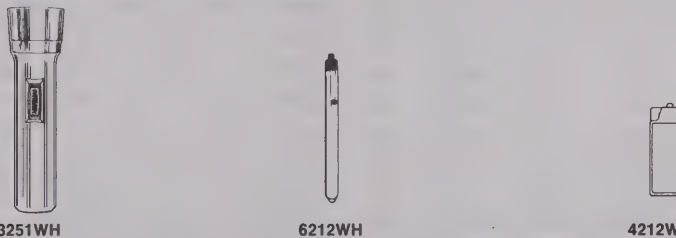
Eveready Number	Case/Package UPC#	Description	Lamp Size	Batt. Size	Standard Package			Sugg. Price Each
					Quan.	Wt.	Cube	
330Y								
1251								
331Y								
1351								
4250IND								
208IND								
9101IND								
231IND								
5109IND								
330Y	08866	2 Cell Light	PR2	D	12	4.5	.44	\$ 3.40
331Y	08867	2 Cell Magnet Light	PR2	D	12	4.9	.44	4.33
1151	05586	2 Cell Heavy Duty	PR2	AA	12	1.8	.15	4.33
1251	01345	2 Cell Heavy Duty	PR2	D	12	4.9	.44	5.77
1351	01370	3 Cell Heavy Duty	PR7	D	12	5.3	.55	6.90
4250IND	04173	2 Cell Rubber Light	KRP102	D	12	6.5	.45	8.86
208IND	03074	Floating Lantern	PR13	6V	12	8.2	1.24	9.06
5109IND	05837	2 Cell Heavy Duty	PR13	6V	12	8.2	1.24	6.18
9101IND	02907	Sealed Beam Lantern	4546	6V	6	11.9	.98	30.90
231IND	05117	Lantern with Flasher	KRP113	6V	6	5.2	.77	30.90

INDUSTRIAL SAFETY LIGHTING PRODUCTS



Eveready Number	Case/Package UPC#	Description	Lamp Size	Batt. Size	Standard Package			Sugg. Price Each
					Quan.	Wt.	Cube	
1259								
1359								
459								
1259	01346	2 Cell Safety Type	PR2	D	12	5.5	.44	\$ 8.86
1359	01371	3 Cell Safety Type	PR7	D	12	6.0	.55	9.89
459	01229	Safety Lantern	PR13	6 volt	6	4.4	.62	16.48

EVEREADY® INDUSTRIAL MEDICAL LIGHTING PRODUCTS



Eveready Number	Case/Package UPC#	Description	Lamp Size	Batt. Size	Standard Package			Sugg. Price Each
					Quan.	Wt.	Cube	
3251WH								
6212WH								
4212WH								
3251WH	03802	White 2 Cell	PR2	D	12	2.2	.25	\$1.85
6212WH	03803	White Penlight	222	AAA	48	1.5	.06	2.99
4212WH	03794	White Disposable	—	Disp.	48	2.7	.1	1.85

WE CAN SUPPLY ALL YOUR REQUIREMENTS FOR INDUSTRIAL ELECTRONIC EQUIPMENT AND PARTS. WE OFFER A COMPLETE LINE WITH UP-TO-DATE STOCK, FAST DELIVERY AND PRODUCTION QUANTITY PRICING. CALL FOR INFORMATION ON NEW OR UNLISTED ITEMS.

Projection & STTV Lamps



Code	Std. Pkg.	Volts	Watts	App. Lumens	App. Color Temp. °K	Avg. Life Hrs.
BBA	6	115-120	250	8500	3400	3
BCA	6	115-120	250	5000	4800	3
BCK	25	120	500	—	3250	50
BLC	25	120	30	400	2775	50
BRH	25	120	1000	30000	3350	75
BRL/BCD	25	12	50	1400	3400	50
BTL	20	120	500	11000	3050	500
BTN	20	120	750	17000	3050	500
BTP	20	120	750	20000	3200	200
BTR	20	120	1000	27500	3200	200
BVE	25	120	625	—	3200	75
BVE/5	25	125	625	—	3200	75
BVT	20	120	1000	23000	3050	500
CAL/CXP	25	120	300	—	3200	25
CAL/CXP/5	25	125	300	—	3200	25
CAR	25	120	150	—	3100	15
CAX	25	120	50	775	2875	50
CAX-130V	25	130	50	775	2875	50
CBA	25	120	500	—	3250	50
CDD	25	120	100	2000	2975	50
CEM	25	120	120	1950	3000	200
CLS/CLG	25	120	300	7700	3200	25
CWA	25	120	750	—	3200	25
CXL/CXR	25	8	50	36	3200	25
CYX	20	120	2000	59000	3200	250
CZA/CZB	25	120	500	—	3300	25
CZX/DAB	25	120	500	12500	3200	25
DAT/DAK	25	120	400	—	—	—
DAY/DAK	25	120	500	12500	3200	25
DAY/DAK/5	25	125	500	12500	3200	25
DCH/DJA/DFP	12	120	150	—	3150	15
DDB	25	120	750	19500	3250	25
DDJ/DZZ	25	10	80	1700	3150	1000
DDL	12	20	150	—	3150	500

Code	Std. Pkg.	Volts	Watts	App. Lumens	App. Color Temp. °K	Avg. Life Hrs.
DDM	12	19	80	—	3350	50
DDS	12	21	80	—	3125	1000
DED	12	13.8	85	—	3150	1000
DEK	25	120	500	—	3250	25
DFG/DFA	12	120	150	—	3150	15
DFN/DFC	12	120	150	—	3150	15
DGB/DMD	12	30	80	—	3200	15
DJL	10	120	150	—	3150	15
DLD/DFZ	12	30	80	—	3400	15
DLG/DLS/DHX	25	21	150	—	3250	10
DNE	12	120	150	—	3350	12
DNF	12	21	150	—	3400	25
DNS/FMC	20	120	500	11000	3000	200
DNT/FMD	20	120	750	17000	3050	200
DPT	20	120	1000	28000	3200	50
DRA	25	120	300	6900	3100	300
DRB/DRC	25	120	1000	32000	3350	25
DRS	25	120	1000	29000	3300	25
DTJ	20	120	1500	42500	3225	25
DVY	25	120	650	20000	3400	25
DXW	25	120	1000	28000	3200	150
DYG	25	30	250	8000	3400	15
DYH	25	120	600	17000	3200	75
DYP	25	120	600	17000	3200	75
DYS/DYV/BHC	25	120	600	17000	3200	75
DYS/DYV/BHC/5	25	125	600	17000	3200	75
EBV	60	120	500	17000	3400	6
EBW	60	120	500	10500	4800	6
ECA	60	120	250	6500	3200	20
ECT	60	120	500	13650	3200	60
EFN	10	12	75	—	3400	50
EFP	10	12	100	—	3400	50
EFR	10	15	150	—	3400	50
EGE	20	120	500	10000	3000	2000
EGG	20	120	750	15000	3000	2000
EGJ	20	120	1000	27500	3200	400
EGR	20	120	750	20000	3200	200
EGT	25	120	1000	27500	3200	200
EHA	25	120	500	—	3250	50
EHA/5	25	125	500	—	3200	50
EHD	25	120	500	10000	3000	2000
EHF	25	120	750	20400	3200	300
EHG	25	120	750	15000	3000	2000
EHJ	25	24	250	8000	3400	50
EHT	25	120	250	5000	3000	2000
EJA	12	21	150	—	3350	40
EJL	12	24	200	—	3400	50
EJM	12	21	150	—	3350	40
EKB	25	120	420	11000	3200	75
EKE	10	21	150	—	3250	40
EKL	25	21	150	4650	3350	40
EKZ	10	10.8	30	—	3100	200
ELB	12	30	80	—	3400	15
ELC	12	24	250	—	3400	50

Code	Std. Pkg.	Volts	Watts	App. Lumens	App. Color Temp. °K	Avg. Life Hrs.	Code	Std. Pkg.	Volts	Watts	App. Lumens	App. Color Temp. °K	Avg. Life Hrs.
ELC/5	12	25	250	—	3400	50	FAL/5	25	125	420	11000	3200	75
ELC/E	12	24	250	—	3400	50	FCB	25	120	600	16500	3200	75
ELH	12	120	300	—	3350	35	FCB/5	25	125	600	16500	3200	75
ELH/5	12	125	300	—	3350	35	FCM	25	120	1000	27000	2700	300
EMD	25	120	750	19500	3200	400	FCR	25	12	100	2900	3250	50
EMM/EKS	12	24	250	—	3400	50	FCS	25	24	150	4500	3400	50
ENG	12	120	300	—	3450	15	FDN	25	120	500	12500	3200	400
ENH	12	120	250	—	3250	175	FEL	25	120	1000	27000	3200	300
ENH/5	12	125	250	—	3250	175	FEV	25	120	200	5500	3200	50
ENX	12	82	360	—	3300	75	FFJ	25	120	600	16500	3200	75
ENX/5	12	86	360	—	3300	75	FFJ/5	25	125	600	16500	3200	75
ENZ	12	30	50	—	3400	25	FFR	12	120	1000	12500	3200	600
EPR	25	120	500	—	3250	50	FFT	20	120	1000	26400	3200	300
ESJ	12	82	85	—	3350	40	FHM	10	120	1000	26000	3200	300
ESP	25	120	150	2400	2950	1000	FHS	12	82	300	—	3300	70
ESR	25	120	100	1900	3000	1000	FHS/5	12	86	300	—	3300	70
ESS	25	120	250	5000	3000	2000	FLT	12	13.8	25	—	—	500
ESY	25	120	150	3300	3075	200	FLW	25	24	300	10450	3500	50
ETC	25	120	150	2800	2900	2000	FNT	25	24	275	10000	3400	75
EVD	25	36	400	14500	3200	50	FTD	12	12	20	—	2900	2000
EVR	25	120	500	10000	2950	2000	GCA	12	120	250	7000	3200	50
EVW	12	82	250	—	3300	50	JCD12V20WH20	25	12	20	300	2850	2000
EXN	12	12	50	—	3000	4000	JCP100V650W	25	100	650	18750	3300	75
EXR	12	82	300	—	3350	35	JCR/120V150WB	12	120	150	7000	3050	100
EXR/5	12	86	300	—	3350	35	PH/111A	25	125	75	1120	2900	25
EXW	12	82	300	—	3400	15	PH/140	25	120	75	120	2900	50
EXY	12	82	250	—	3250	200	WQ1500T3/CL/240	—	240	1500	—	—	—
EYB	25	82	360	10000	3300	75	WQ500T3/CL/120	25	120	500	11000	3000	2000
EYB/5	25	86	360	10000	3300	75	WQ500T3/CL/130	25	130	500	10000	3000	2000
EYC	12	12	75	—	3050	4000							
EYH/FKT	25	120	250	5400	3050	200							
FAD	25	120	650	16500	3200	100							
FAL	25	120	420	11000	3200	75							

**WIKO LAMPS ARE AVAILABLE FOR THE
FOLLOWING EQUIPMENT AND FIXTURES:**

- AUDIO VISUAL
- MICROGRAPHICS
- STAGE AND STUDIO
- PHOTOGRAPHY
- GENERAL LIGHTING
- DISPLAY LIGHTING
- MEDICAL/SCIENTIFIC

CALL US FOR COMPLETE INFORMATION!

WIKO Display Lighting

■ HALOGEN DISPLAY LAMPS (MR16)

Ordering Code	Standard Pkg.	Rated		Reflector	Base	Filament	Approx. Color Temp.	Average Life	Average Center CP	Approx. Degrees Beam Spread
		Volts	Watts							
BAB	12	12	20	Faceted	GX5.3	CC-6	2,925	2,000	460	36°
ESX	12	12	20	Faceted	GX5.3	CC-6	2,925	2,000	3,300	12°
EZX	12	12	20	Faceted	GX5.3	CC-6	2,925	2,000	10,780	5.5°
EYP	12	12	42	Faceted	GX5.3	CC-6	3,050	3,000	991	36°
EYR	12	12	42	Faceted	GX5.3	CC-6	3,025	3,000	7,070	12°
EYS	12	12	42	Faceted	GX5.3	CC-6	3,075	3,000	2,800	20°
ENL	12	12	50	Faceted	GX5.3	CC-6	3,000	2,000	2,500	30°
EXN	12	12	50	Faceted	GX5.3	CC-6	3,050	3,000	1,500	40°
EXT	12	12	50	Faceted	GX5.3	CC-6	3,025	3,000	9,150	13°
EXZ	12	12	50	Faceted	GX5.3	CC-6	3,075	3,000	3,000	24°
EYC	12	12	75	Faceted	GX5.3	CC-6	3,050	3,500	2,000	38°
EYF	12	12	75	Faceted	GX5.3	CC-6	3,050	3,500	11,500	14°
FPA	12	12	65	Faceted	GX5.3	CC-6	3,050	3,500	11,500	14°
FPB	12	12	65	Faceted	GX5.3	CC-6	3,050	3,500	2,000	38°

■ HALOGEN COLOR DISPLAY LAMPS (MR16)

Lamp	Standard Pkg.	Rated		Reflector	Base	Filament	Average Life	Approx. Beam Spread	Colour
		Volts	Watts						
FNF	12	12	50	Faceted	GX5.3	CC-6	3,000	10°	Blue
FNC	12	12	50	Faceted	GX5.3	CC-6	3,000	10°	Yellow
FNE	12	12	50	Faceted	GX5.3	CC-6	3,000	10°	Green
FND	12	12	50	Faceted	GX5.3	CC-6	3,000	10°	Red

■ HALOGEN DISPLAY LAMPS (MR11)

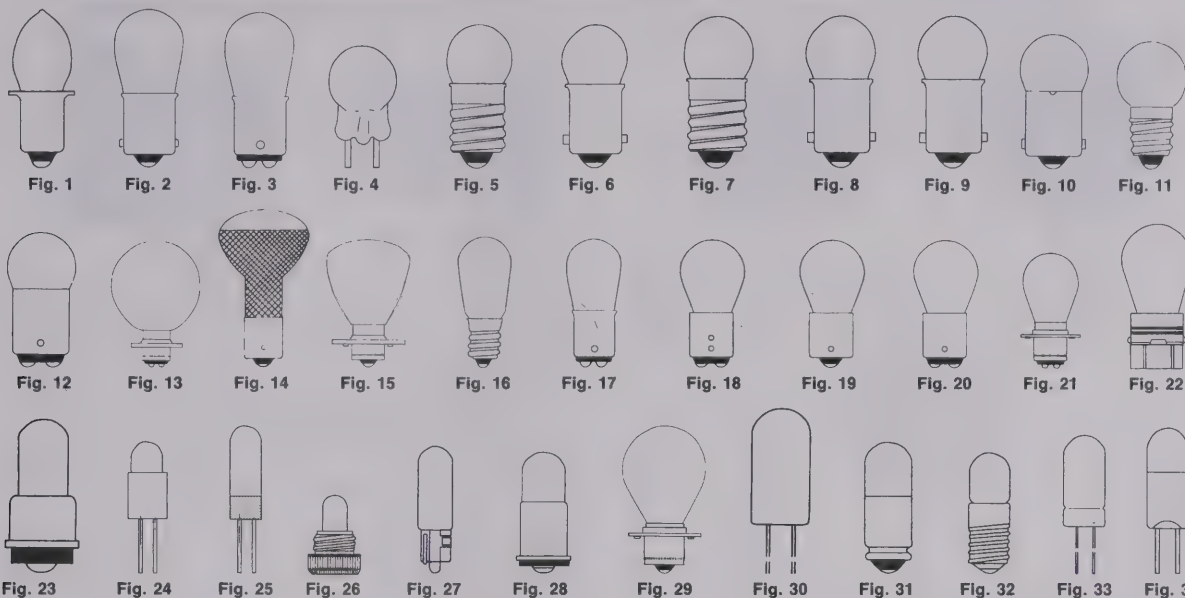
Lamp	Standard Pkg.	Rated		Reflector	Base	Filament	Approx. Color Temp.	Average Life	Average Center CP	Approx. Degrees Beam Spread
		Volts	Watts							
FTB	12	12	20	Faceted	GZ4	CC-6	2,900	2,000	3,000	10°
FTC	12	12	20	Stippled	GZ4	CC-6	2,900	2,000	1,300	20°
FTD	12	12	20	Faceted	GZ4	CC-6	2,900	2,000	450	30°
FTE	12	12	35	Faceted	GZ4	CC-6	2,950	2,000	4,800	10°
FTF	12	12	35	Stippled	GZ4	CC-6	2,950	2,000	2,500	20°
WK11-35W	12	12	35	Faceted	GZ4	CC-6	2,950	2,000	800	30°

THESE DRY-LAM[®] PRODUCTS ALSO ARE AVAILABLE FROM WIKO:

- LAMINATING EQUIPMENT
- LAMINATING FILM
- LAMINATING POUCHES
- SPECIALTY POUCHES
- DRY MOUNT TISSUE

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INCANDESCENT LAMPS



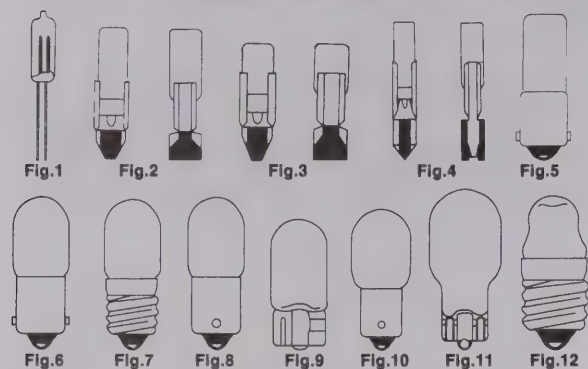
Lamp No.	Bulb No.	Volts	Amps	M.S.C.P. Norm	Avg. Life (Hrs.)	Fig.	Price Each
PR2	B-3½	2.38	.50	.8	10	1	\$ 0.41
PR2*	B-3½	2.38	.50	.8	10	1	.39
PR3	B-3½	3.57	.50	1.5	15	1	.41
PR4	B-3½	2.33	.27	.4	10	1	.41
PR6	B-3½	2.47	.30	.45	10	1	.41
PR13	B-3½	4.75	.50	2.0	15	1	.41
PR30	B-3½	3.75	.86	2.25	10	1	.41
1004	B-6	12.8	.94	15.0	100	2	.51
1309	B-6	28.0	.52	15.0	300	3	.95
10	G-3½	2.5	.50	.5	3000	4	1.23
12	G-3½	6.3	.15	.35	10	4	1.22
13	G-3½	3.7	.30	.35	15	5	.39
14	G-3½	2.47	.30	.15	15	5	.39
19	G-3½	14.4	.10	.90	1000	4	1.23
51	G-3½	7.5	.22	1.0	1000	6	.37
53	G-3½	14.4	.10	.75	1000	6	.38
27	G-4½	4.9	.30	1.4	30	7	.61
55	G-4½	7.0	.41	2.0	500	8	.37
57	G-4½	14.0	.24	2.0	500	8	.40
407	G-4½	4.9	.30	FL	50	7	.54
425	G-4½	5.0	.50	FL	15	7	.49
502	G-4½	5.1	.15	.6	100	7	.44
605	G-4½	6.15	.50	3.4	15	7	.52
1895	G-4½	14.00	.27	2.0	1000	8	.40
301	G-5	28.0	.17	3.0	500	9	.86
67	G-6	13.5	.59	4.0	5000	10	.49
509K	G-6	24.0	.18	2.8	1000	11	.83
623	G-6	28.0	.37	6.0	1000	10	.95
624	G-6	28.0	.37	6.0	1000	12	.95
1251	G-6	28.0	.23	3.0	2000	10	.77
1252	G-6	28.0	.23	3.0	2000	12	.82
1240	G-16½	32.0	3.5	225.0	50	13	14.88
1383	R-12	13.0	1.50	—	300	14	4.16
1385	R-12	28.0	.72	—	300	14	4.16
1209	RP-11	6.1	4.01	32.0	125	15	9.89
6S6-12V	S-6	12.0	6.0	—	1500	16	.85
6S6-24V	S-6	24.0	6.0	—	1500	16	.85
6S6-30V	S-6	30.0	6.0	—	1500	16	.85
6S6-120V	S-6	120.0	6.0	—	1500	16	.91
6S6DC-120V	S-6	120.0	6.0	—	1500	17	.91
6S6DC-130V	S-6	130.0	6.0	—	1500	17	.91
198	S-8	12.8	2.25	32.0	1200	18	.61
		14.0	.59	3.0	5000		
307	S-8	28.0	.67	21.0	300	19	.95
308	S-8	28.0	.67	21.0	300	20	.95
1141	S-8	12.8	1.44	21.0	500	19	.60
1156	S-8	12.8	2.10	32.0	600	19	.48
1157	S-8	12.8	2.10	32.0	600	18	.37
		14.0	.59	3.0	5000		
1157A	S-8	12.8	2.10	—	600	18	.60
		14.0	.59	—	5000		

Lamp No.	Bulb No.	Volts	Amps	M.S.C.P. Norm	Avg. Life (Hrs.)	Fig.	Price Each
1203	S-8	28.0	.71	21.0	400	19	\$0.95
1460	S-8	6.5	2.75	23.0	100	21	8.05
1460X	S-8	6.5	2.75	23.0	100	21	8.80
1591	S-8	28.0	.61	15.0	1000	19	1.25
1630	S-8	6.5	2.75	23.0	100	21	8.05
1631x	S-8	6.5	2.75	23.0	100	21	8.80
1634	S-8	20.0	1.01	24.0	200	21	8.80
1683	S-8	28.0	1.02	32.0	500	19	.95
1692	S-8	28.0	.61	15.0	1000	20	1.07
2057	S-8	12.8	2.10	32.0	1200	18	.67
		14.0	.48	2.0	5000		.67
2057NA	S-8	12.8	2.10	—	1200	18	.67
		14.0	.48	—	5000		.67
3057	S-8	12.8	2.10	32.0	1200	22	1.65
		14.0	.59	3.0	5000		
3157	S-8	12.8	2.10	32.0	1200	22	1.65
		14.0	.48	3.0	1500		
1763	S-11	6.1	4.10	32.0	125	29	9.89
683	T-1	5.0	.06	.05	25000	30	.46
715	T-1	5.0	.115	.15	40000	30	.46
6838	T-1	28.0	.024	.15	4000	30	1.17
6839	T-1	28.0	.024	.15	4000	23	1.43
7839	T-1	28.0	.024	.15	4000	24	1.55
42001	T-1	1.35	.32	.17	5	25	.63
42003	T-1	2.7	.32	.70	5	25	.63
323	T-1¼	3.0	.19	.25	350	26	1.48
73	T-1¼	14.0	.08	.30	15000	27	.49
74	T-1¼	14.0	.10	.70	500	27	.62
327	T-1¼	28.0	.04	.34	4000	28	.45
328	T-1¼	6.0	.20	.34	20000	28	.59
330	T-1¼	14.0	.08	.50	1500	28	.61
376	T-1¼	28.0	.06	.34	25000	28	.61
382	T-1¼	14.0	.08	.30	15000	28	.61
385	T-1¼	28.0	.04	.15	10000	28	.61
386	T-1¼	14.0	.10	.50	10000	31	.61
387	T-1¼	28.0	.04	.30	7000	28	.46
387*	T-1¼	28.0	.04	.30	7000	28	.44
388	T-1¼	28.0	.04	.30	7000	31	.61
1769	T-1¼	2.5	.20	.22	500	32	.60
2182	T-1¼	14.0	.08	.30	40000	33	.41
7382	T-1¼	14.0	.10	.50	10000	34	.80
7387	T-1¼	28.0	.04	.30	7000	34	.80
7387*	T-1¼	28.0	.04	.30	7000	34	.78

*Bulk, FL = Flasher Lamp. M.S.C.P. = Mean Spherical Candlepower.

PRICES SHOWN ARE FOR REFERENCE ONLY. PLEASE CALL US FOR CURRENT QUOTES.

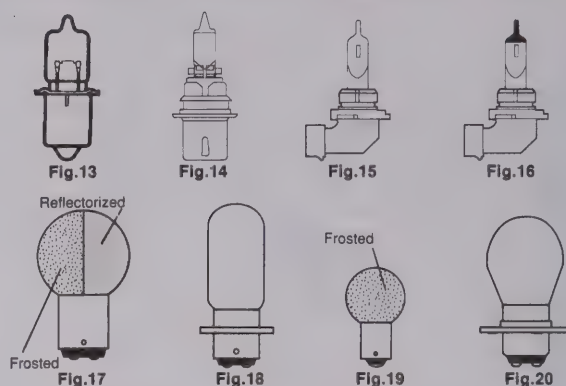
INCANDESCENT LAMPS



Lamp No.	Bulb No.	Volts	Amps	M.S.C.P. Norm	Avg. Life (Hrs.)	Fig.	Price Each
A1C†	T-2	105-125	1/7 Watts	—	25000	1	\$0.41
6PSB5	T-2	6.0	.14	—	20000	2	.98
12ESB5	T-2	12.0	.04	—	7500	3	1.11
12PSB5	T-2	12.0	.17	—	12000	2	1.11
24E3	T-2	24.0	.035	—	7000	4	1.22
24PSB5	T-2	24.0	.073	—	10000	2	1.10
24PSB5*	T-2	24.0	.073	—	10000	2	1.08
24X†	T-2	24.0	.035	—	8000	4	1.23
28ESB5	T-2	28.0	.04	—	6000	3	1.10
28PSB5	T-2	28.0	.04	—	5000	2	1.10
48PSB5	T-2	48.0	.05	—	10000	2	1.10
60PSB5	T-2	60.0	.05	—	7500	2	1.10
24MB	T-2½	24.0	.07	.50	10000	5	1.10
28MB	T-2½	28.0	.04	.29	5000	5	1.10
48MB	T-2½	48.0	.05	—	10000	5	1.10
60MB	T-2½	60.0	.05	.73	7500	5	1.10
120MB	T-2½	120.0	.025	.36	7500	5	1.31
155MB	T-2½	155.0	.025	8.0	10000	5	1.60
B1A†	T-3¼	105-125	1/25	.3	15000	6	.86
40	T-3¼	6.3	.15	.50	3000	7	.40
44	T-3¼	6.3	.25	.90	3000	8	.37
46	T-3¼	6.3	.25	.90	3000	7	.39
47	T-3¼	6.3	.15	.50	3000	8	.39
161	T-3¼	14.0	.19	1.0	1500	9	.39
161*	T-3¼	14.0	.19	1.0	1500	9	.38
184	T-3¼	14.0	.24	1.0	5000	9	.60
194	T-3¼	14.0	.27	2.0	2500	9	.35
259	T-3¼	6.3	.25	.65	5000	9	.40
313	T-3¼	28.0	.17	3.5	500	8	.49
400	T-3¼	28.0	.10	1.6	1000	9	.49
464	T-3¼	28.0	.17	3.0	15000	9	.60
555	T-3¼	6.3	.25	.90	3000	9	.41
585	T-3¼	28.0	.04	.34	2500	9	.49
656	T-3¼	28.0	.06	.62	2500	9	.49
657	T-3¼	28.0	.08	.62	7500	9	.59
755	T-3¼	6.3	.15	.33	20000	8	.57
756	T-3¼	14.0	.08	.31	15000	8	.57
757	T-3¼	28.0	.08	.62	7500	8	.57
1408	T-3¼	10.0	.13	.80	250	8	.69
1408*	T-3¼	10.0	.13	.80	250	8	.67
1487	T-3¼	14.0	.20	1.40	3000	7	.40
1813	T-3¼	14.4	.10	.86	1000	8	.49
1815	T-3¼	14.0	.20	1.40	3000	8	.49
1818	T-3¼	24.0	.17	3.30	250	8	.49
1819	T-3¼	28.0	.04	.34	2500	8	.49
1820	T-3¼	28.0	.10	1.6	1000	8	.49
1822	T-3¼	36.0	.10	2.1	1000	8	.61
1823	T-3¼	48.0	.10	3.2	1000	7	.75
1835	T-3¼	55.0	.05	1.1	5000	8	.74
1847	T-3¼	6.3	.15	.38	5000	8	.37
1850	T-3¼	5.0	.09	.25	1500	8	.59
1891	T-3¼	14.0	.24	2.0	500	8	.44
1893	T-3¼	14.0	.33	2.0	7500	8	.43
1906	T-3¼	5.0	.07	.19	1000	8	.64
B7A†	T-4½	105-125	1/4	2.0	5000	7	4.23
957	T-4½	9.84	.50	4.6	200	10	1.25
904	T-5	13.5	.69	4	5000	11	.79
908	T-5	6.0	1.5	12	50	11	.79
909	T-5	6.0	.62	3.8	50	11	.79
912	T-5	12.8	1.0	12	1000	11	.79
918	T-5	12.8	.56	6.5	50	11	.79
928	T-5	28.0	.30	6	500	11	.79
222	TL-1¾ TL-3	2.25	.25	—	5	12	.43

*Bulk. †Neon. ‡Special Prick Punch Base.

HALOGEN/VEHICLE/MEDICAL/SCIENTIFIC LAMPS



HPR-HALOGEN MINIATURE LAMPS IC-6 FILAMENT SHAPE

Lamp No.	Base	Volts	Amps	W x L (mm)	Avg. Life (Hrs.)	Fig.	Price Each
HPR36	P13.55	5.5	1.0	—	40	13	\$4.12
HPR51	P13.55	6.5	0.7	—	25	13	4.12
HPR51*	P13.55	6.5	0.7	—	25	13	3.63
HPR52	P13.55	2.8	0.85	—	10	13	4.12
HPR53	P13.55	4.0	0.85	—	25	13	4.12

VEHICLE/MEDICAL

Lamp No.	Base	Volts	Amps	W x L (mm)	Avg. Life (Hrs.)	Fig.	Price Each
9004	Axial Prefocus	12.0	65/45 Watts	—	150/320	14	\$8.73
9005	RA Prefocus	12.8	65 Watts	—	150	15	9.23
9006	RA Prefocus	12.8	55 Watts	—	320	16	3.69

MEDICAL/SCIENTIFIC AND MICROSCOPE LAMPS

Lamp No.	Base	Volts	Amps	W x L (mm)	Avg. Life (Hrs.)	Fig.	Price Each
EI-737	DC Bay	6	3.0	30 x 53	100	17	\$11.43
EI-77Z	DC Bay	6	15 watts	19 x 52	100	18	14.48
EL-2B	Min Bay	8	12 watts	18 x 32	100	19	4.95
1460	DC Pref	6.5	2.75	26.5 x 50	100	20	8.05
1460X	DC Pref	6.5	2.75	26.5 x 50	100	20	8.80
1630	DC Pref	6.5	2.75	26.5 x 50	100	20	8.05
1631X	DC Pref	6.5	2.75	26.5 x 50	100	20	8.80
1634	DC Pref	20	1.04	26.5 x 50	200	20	8.80

*Bulk

**EIKO LAMPS ARE AVAILABLE
FOR THE FOLLOWING
APPLICATIONS:**

- AUTOMOTIVE
- MINIATURE
- SUB-MINIATURE
- LED & DISPLAYS

CALL US FOR INFORMATION!

LOW LEVEL RELAYS

CLASS 60 LOW LEVEL MINIATURE RELAYS



CLASS 60HE2

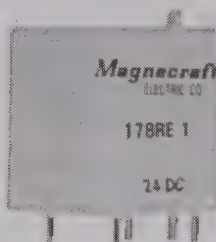


CLASS 60HE1

Immersion cleanable. Low profile for closely spaced PC boards. Sensitive and standard coils available. Unique removable tape seal for normal outgassing of enclosure. Standard .100" grid. High contact force. Epoxy sealed for protection during automatic wave soldering and cleaning. UL recognized, File No. E28610. CSA certified, File No. LR36858. **Contact Material:** Silver alloy, gold flashed. **Contact Resistance:** 50 milliohms initial. **Operate Time:** 3 msec. typical. **Release Time:** 2 msec. typical. **Enclosure:** Thermoset plastic, immersion cleanable. Size: DPDT, .435"H x .895"W x 1.1"L; SPDT, .435"H x .600"W x 1.1"L. **Weight:** .4 oz.

Mfr. Number	Coil			Price Each
	D.C. Nominal Volts	Ohms	Max. Pull-In Volts	
SENSITIVE COIL, SINGLE POLE, 1 AMP				
W60HE1S-5DC	5	75	4.0	\$11.55
W60HE1S-12DC	12	440	9.6	11.55
W60HE1S-24DC	24	3100	19.2	12.29
W60HE1S-48DC	48	5250	38.4	12.90
SENSITIVE COIL, DOUBLE POLE, 1 AMP				
W60HE2S-5DC	5	75	4.0	\$13.56
W60HE2S-12DC	12	440	9.6	13.56
W60HE2S-24DC	24	3100	19.2	14.72
W60HE2S-48DC	48	5250	38.4	15.45

CLASS 178 LOW LEVEL RELAYS

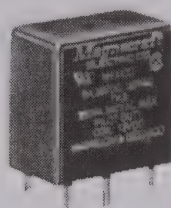


Less than .53 cubic inch. Epoxy sealed for protection during automatic wave soldering and cleaning. UL recognized, File No. E52197. CSA certified, File No. LR41893. Silver SPDT contacts rated 3 A (resistive load at 28VDC or 120VAC). **Contact Resistance:** 100 milliohms max. **Operate Time:** 20 msec. max. **Release Time:** 10 msec. max. **Dielectric Strength:** 1500V rms contact to coil and coil to frame; 500V rms across open contacts. **Weight:** 0.53 oz.

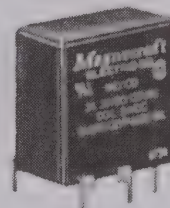
Mfr. Number	Coil		Contact Current (Amps)	Price Each
	Nominal Coil Voltage (VDC)	Coil Resis.		
W178RE1-5DC	5	63	5	\$6.48
W178RE1-12DC	12	360	5	6.48
W178RE1-24DC	24	1440	5	6.48
W178URE1-5DC	5	63	10	7.16
W178URE1-12DC	12	360	10	7.16
W178URE1-24DC	24	1440	10	7.88

Coil max. pull-in 75% of nominal or less @ 23°C

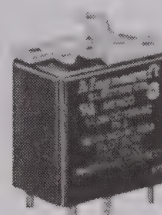
CLASS 49 LOW LEVEL RELAYS



CLASS 49RE1C1, 49RE1A1



CLASS 49RE1C2



CLASS 49R1C4

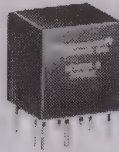
Miniature enclosed relays measure 1.1 cubic inch. A variety of mounting configurations. Printed circuit terminals. Tapped mounting holes (49R1Cr). TV 5 rating available. Standard pilot duty to 240VAC. Magnetic motor controller rating of 1/4 hp at 120VAC. Epoxy sealed models available. SPST and SPDT models available for AC and DC operation. **Standard Pilot Duty:** 5 to 10 at 120/240VAC. **Contact Rating:** 3, 5 and 10A contacts resistive load at 28VDC or 120/240VAC; motor load, 1/4 hp at 120VAC (10A only). TV-3 SPST-NO, SPST-NC, SPDT, TV-5SPST-NO (10A only). **Contact Arrangement:** Single pole, Form A, B or C. **Contact Material:** Silver, gold plated (3A at 120VAC); SCO (5 and 10A at 240VAC). **Contact Resistance:** 100 milliohms max. at 6V, 1A. **Operate Time:** 12 msec. typical. **Release Time:** 3 msec. typical. **Dielectric Strength:** 1500V rms contact to coil and coil to frame; 500V rms across open contacts. **Weight:** 1.5 oz. UL recognized, File No. E52197. CSA certified, File Nos. LR20954 and LR63386.

Mfr. No.	Contacts		Nominal Voltage (VDC)	Coil Resistance (Ohms)	Max. Pull-In Voltage	Price Each
	Arrange.	Rating (Amps)				
Printed Circuit Board Mounting						
W49RE1C1VG-3DC-SIL	SPDT	3	3	90	2.5	\$11.09
W49RE1C1VG-5DC-SIL	SPDT	3	5/6	235	3.75	11.09
W49RE1C1VG-12DC-SIL	SPDT	3	12	1350	9.0	11.60
W49RE1C2VF-6DC-SIL	SPDT	3	6	410	4.8	11.09
W49RE1C2VF-12DC-SIL	SPDT	3	12	1640	9.6	11.60
W49RE1C2VF-24DC-SIL	SPDT	3	24	6560	18.0	12.47
W49RE1C1VG-5DC-SCO	SPDT	5	5/6	235	3.75	11.09
W49RE1C1VG-12DC-SCO	SPDT	5	12	1350	9.0	11.60
W49RE1C1VG-24DC-SCO	SPDT	5	24	5400	18.0	12.24
W49RE1C2VF-6DC-SCO	SPDT	5	6	410	4.8	11.09
W49RE1C2VF-12DC-SCO	SPDT	5	12	1640	9.6	11.60
W49RE1C2VF-24DC-SCO	SPDT	5	24	6560	18.0	12.47
W49RE1C1VW-5DC-SCO	SPDT	10	5/6	100	3.75	12.41
W49RE1C1VW-12DC-SCO	SPDT	10	12	600	9.0	12.98
W49RE1C1VW-24DC-SCO	SPDT	10	24	2400	18.0	13.38
Solder Terminals, Bracket Mounting						
W49R1C4VG-5DC-SCO	SPDT	5	5/6	235	3.75	11.73
W49R1C4VG-12DC-SCO	SPDT	5	12	1350	9.0	12.24
W49R1C4VW-5DC-SCO	SPDT	10	5/6	100	3.75	13.69
W49R1C4VW-24DC-SCO	SPDT	10	24	2400	18.0	14.20

THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS WE HAVE AVAILABLE. PLEASE CONTACT US FOR ADDITIONAL PRODUCT INFORMATION.

PRINTED CIRCUIT RELAYS

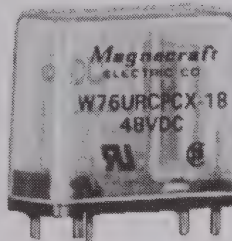
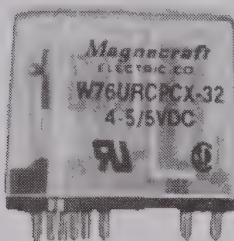
CLASS 7 MICROMINIATURE PRINTED CIRCUIT RELAYS



One or two Form C bifurcated, gold-clad, silver-palladium contacts rated from low level 50 μ A 50 mV to 2 amps/24 VDC or 1 amp/120 VAC. **Max. Voltage:** 120 VAC 150 VDC. **Max. Switched Power:** 60 watts or 120 VA. **Contact Arrangement:** Standard 1 Form C (SPDT) or 2 Form C (DPDT); others can be supplied on special request. **Operate Time:** 5 msec. **Release Time:** 2 msec. **Dielectric Strength:** 500 VAC for 1 minute. **Mechanical Life:** 100 million operations. The epoxy sealed, plastic enclosure conforms to UL 94V-0. Microminiature relays require only .168 sq. in. of board space. **Size:** .410" sq. $\times$.410" high. RF switching characteristics of these relays are excellent. Available with magnetic shield on special order.

Mfr. Number	Contacts	Coil		Price Each
		Volts	Ohms	
W7PCX-1	SPDT	5	75	\$14.02
W7PCX-3	SPDT	12	440	14.02
W7PCX-4	SPDT	24	1550	17.82
W7PCX-5	DPDT	5	75	13.01
W7PCX-7	DPDT	12	440	14.46
W7PCX-8	DPDT	24	1550	19.97

CLASS 76 MINIATURE PRINTED CIRCUIT RELAYS



Enclose PC relays designed for continuous operation. **Contact Rating:** Single pole—10 amps at 120VAC or 16 amps (Suffix-1XX) at 250VAC. Double pole—8 amps at 120/250VAC. **Operate Time:** Approx. 10 milliseconds. **Release Time:** Approx. 8 milliseconds. **Weight:** Approx. 1/2 oz. **Size:** 1" H $\times$ 1.60" W $\times$ 0.50 D.

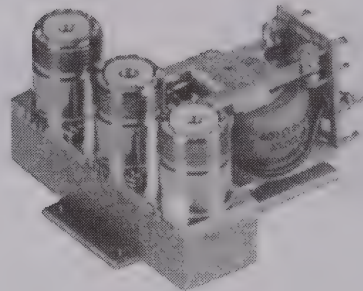
Mfr. No.	Contacts		Coil		Price Each
	Arrang.	Current (Amps)	Nom. Voltage	Resistance	
EPOXY SEALED					
W76EURPCX-14	SPDT	10	5 VDC	47	\$ 7.99
W76EURPCX-15	SPDT	10	6 VDC	68	7.99
W76EURPCX-16	SPDT	10	12 VDC	275	7.99
W76EURPCX-17	SPDT	10	24 VDC	1100	7.99
W76EURPCX-18	SPDT	10	48 VDC	4170	9.04
W76EURPCX-61	DPDT	5	5 VDC	47	8.78
W76EURPCX-62	DPDT	5	6 VDC	68	8.78
W76EURPCX-63	DPDT	5	12 VDC	275	8.78
W76EURPCX-64	DPDT	5	24 VDC	1100	8.78
W76EURPCX-146	SPDT	16	5 VDC	47	9.04
W76EURPCX-147	SPDT	16	6 VDC	68	9.04
W76EURPCX-148	SPDT	16	12 VDC	275	9.04
W76EURPCX-149	SPDT	16	24 VDC	1100	9.04
W76EURPCX-150	SPDT	16	48 VDC	4170	10.36

COIL DATA

Current shown is pull-in at specified value or less. Voltage shown is nominal. Pull-in at 80% of nominal or less for DC relays; 85% of nominal for AC relays at 25°C. Resistance shown is $\pm$ 10% at 25°C.

COAXIAL RELAYS

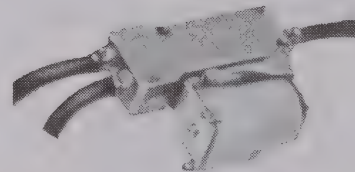
CLASS 128 COAXIAL RELAYS



SPDT contacts for coaxial switching. Auxiliary contacts available. AC or DC operation. Designed for panel mounting. UHF connectors standard. **RF Contact Load Rating:** 500 watts max. up to 1000 MHz. **RF Contact Combination:** SPDT (1 Form C). **Initial Contact Resistance:** 0.05 ohm max. **VSWR (Voltage Standing Wave Ratio):** 1.25 to 1 max. from 0 to 470 MHz. **Cross Talk:** 40 dB min. for 0 to 470 MHz. **Dielectric Strength:** 1000 volts rms at sea level. **Operate Time:** 20 msec. max. **Release Time:** 20 msec. max. **Temperature Range:** -55°C to +65°C. **Aux. Contact Rating:** 10 amps at 120 VAC or 28VDC, resistive. **Aux. Contact Combination:** DPDT (2 Form C). **Aux. Contact Material:** Code 120, silver alloy, gold flashed, .187" dia. **Weight:** 9 ozs.

Mfr. No.	Coil		Price Each
	Volts	Ohm	
WITHOUT AUXILIARY CONTACTS			
W128X-9	12VDC	100	\$267.00
WITH DPDT AUXILIARY CONTACTS			
W128AX-11	115VAC	.....	\$299.03
W128X-14	12VDC	100	299.69
W128X-15	24VDC	400	299.69

CLASS 120 SPDT COAXIAL RELAY



RF Contact Load Rating: 150 watts max. up to 470 MHz. **RF Contact Combination:** SPDT (1 Form C). **Initial Contact Resistance:** 50 milliohms max. **VSWR (Voltage Standing Wave Ratio):** 1.25 to 1 max. from 0 to 470 MHz. **Dielectric Strength:** 1000 volts rms at sea level. **Insulation Resistance:** 1000 megohms min. **Operate Time:** 15 msec. max. **Release Time:** 7 msec. max. **Temperature Range:** -55°C to +65°C. **Cable:** RG58A/U. 12" long. **Weight:** 3 ozs.

Mfr. No.	Coil		Price Each
	Volts	Ohms	
W120X-14	12VDC	100	\$117.16

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DEVELOPMENTS IN ELECTRONICS,
NEW ITEMS ARE CONSTANTLY
BEING ADDED TO OUR INVENTORY.
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INFORMATION.**

MINIATURE INDUSTRIAL RELAYS

CLASS 67 ENCLOSED PLUG-IN RELAYS

VersaPac Class 67 miniature industrial relays are UL recognized (File No. E52197) and CSA certified No. LR41729. Designed for applications requiring 1 to 8 Form C contacts where space, weight and low cost are of prime importance. Single and bifurcated, crossbar contacts of silver alloy rated 3 to 5 amps at 32 VDC or 120 VAC resistive load. All plug-in relays feature plastic dust covers and combination solder plug-in terminals with 3-48 NC stud. PC terminals available. Voltage specified relays pull in at 80% of nominal or less for DC relays and 85% of nominal or less for AC relays at 25°C. Resistance values $\pm 10\%$ measured at 25°C. Ultrasensitive versions are also available in 2 or 4 Form C contacts rated 3 amps at 32 VDC or 120 VAC resistive load. **Size:** 2 Form C. 0.734" $\times$ 0.938" $\times$ 1.188"; 4 Form C. 0.734" $\times$ 1.156" $\times$ 1.188"; 6 Form C. 0.734" $\times$ 1.375" $\times$ 1.188"; 8 Form C. 0.734" $\times$ 1.592" $\times$ 1.188".

Mfr. Number	Contact Rating	Coil		Price Each
		Volts	Ohms	
STANDARD ADJUSTMENT 2 FORM C				
W67RCSX-1	5 amps	%	52	\$11.04
W67RCSX-2	5 amps	12	185	11.04
W67RCSX-3	5 amps	24	700	12.11
W67RCSX-4	5 amps	48	2,500	12.14
W67RCSX-5	5 amps	115	15,000	13.71
W67TRCSX-2	5 amps*	12	185	13.79
W67TRCSX-3	5 amps*	24	700	13.79
STANDARD ADJUSTMENT 4 FORM C				
W67RCSX-6	5 amps	%	52	\$15.38
W67RCSX-7	5 amps	12	185	15.38
W67RCSX-8	5 amps	24	700	15.53
W67RCSX-9	5 amps	48	2,500	15.67
W67RCSX-10	5 amps	115	15,000	17.43
W67TRCSX-7	5 amps*	12	185	17.47
W67TRCSX-8	5 amps*	24	700	17.47
STANDARD ADJUSTMENT 6 FORM C				
W67RCSX-12	5 amps	12	90	\$20.05
W67RCSX-13	5 amps	24	430	20.05
W67RCSX-101	5 amps	5	52	12.69
W67RCSX-103	5 amps	24	700	12.69
W67TRCSX-12	5 amps*	12	90	23.76
W67TRCSX-13	5 amps*	24	430	23.76
STANDARD ADJUSTMENT 8 FORM C				
W67RCSX-17	5 amps	12	72	\$36.55
W67RCSX-18	5 amps	24	350	36.55
W67TRCSX-17	5 amps*	12	72	40.22
W67TRCSX-18	5 amps*	24	350	40.22

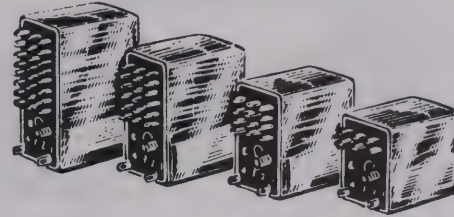
*Bifurcated contacts.

AC VERSIONS

Mfr. Number	5 Amp Contacts	Coil		Price Each
		Volts	V.A.	
W67ACSX-5	DPDT	120 AC	1.5	\$18.93
W67ACSX-10	4PDT	120 AC	2.5	23.26
W67ACSX-15	6PDT	120 AC	2.5	33.68
W67ARCSX-5	DPDT	120 AC	1.5	18.93
W67ARCSX-10	4PDT	120 AC	2.5	23.26
W67ARCSX-15	6PDT	120 AC	2.5	33.68

HERMETIC SEALED

Mfr. Number	Retrofits	5 Amp Contacts	Coil		Price Each
			Volts	Ohms	
W67HSX-179	W33HSX-179	DPDT	24 DC	700	\$192.79
W67HSX-183	W33HSX-183	4PDT	24 DC	700	274.16

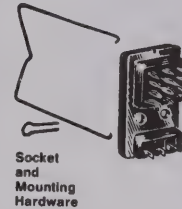
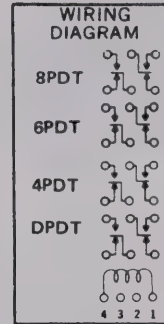


8PDT

6PDT

4PDT

DPDT



Socket and Mounting Hardware

PRINTED CIRCUIT VERSIONS

Mfr. Number	5 Amp Contacts	Coil		Price Each
		Volts	Ohms	
W67RPCX-2	DPDT	12	185	\$11.04
W67RPCX-3	DPDT	24	700	12.11
W67RPCX-7	4PDT	12	185	15.38
W67RPCX-8	4PDT	24	700	15.38
W67RPCX-12	6PDT	12	90	20.05
W67RPCX-13	6PDT	24	430	20.05

ULTRASENSITIVE ADJUSTMENT

Mfr. Number	3 Amp Contacts	Coil		Price Each
		mA†	Ohms	
W67SCSX-1	DPDT	9.2	1,000	\$13.74
W67SCSX-2		6.3	2,500	13.94
W67SCSX-3		4.4	5,000	14.73
W67SCSX-6		13.5	1,000	16.23
W67SCSX-7	4PDT	8.9	2,500	16.38
W67SCSX-8		6.3	5,000	16.62

†Max. pickup current, mA DC.

SOCKETS

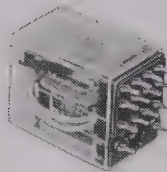
Relay hold-down clip included.

Mfr. Number	Description	Overall Height, in.	Price Each
70-303	2 pole solder terminal	.571	\$ 5.14
70-304	2 pole PC terminal	.496	5.14
70-305	4 pole solder terminal	.571	7.05
70-306	4 pole PC terminal	.496	7.05
70-307	6 pole solder terminal	.571	10.03
70-308	6 pole PC terminal	.496	10.03
70-309	8 pole solder terminal	.560	14.80
70-310	8 pole PC terminal	.530	14.80

OUR PRICES ARE COMPETITIVE DUE TO OUR ASSOCIATION WITH A NATIONAL BUYING GROUP.

GENERAL PURPOSE RELAYS

CLASS 78 ENCLOSED



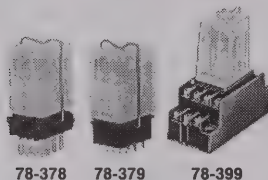
General purpose relays available in SPDT, DPDT, and 4PDT, plug-in solder, quick-connect, or printed circuit terminals. **Contacts:** SPDT—Silver cadmium oxide rated 15 amps at 120VAC/30VDC; DPDT—silver cadmium oxide rated 10 amps at 240VAC/30VDC; 4PDT—silver rated 3 amps at 120 VAC/30VDC. **Coil Power:** 0.9 Watts/1.2VA nom. **Operate Time:** 25 milliseconds. **Release Time:** 25 milliseconds.

Mfr. Number	Con- tacts	Coil*		Price Each
		Volts	Ohms	
SOLDER PLUG-IN TERMINALS				
W78ARCSX-7	DPDT	6 AC	12.2	\$11.00
W78ARCSX-9	DPDT	24 AC	180	11.00
W78ARCSX-11	DPDT	120 AC	4400	11.57
W78ARCSX-12	DPDT	240 AC	18,790	14.47
W78ACSX-2	4PDT	12 AC	46	10.11
W78ACSX-3	4PDT	24 AC	180	10.11
W78ACSX-5	4PDT	120 AC	4400	10.66
W78ACSX-6	4PDT	240 AC	18,790	13.62
W78RCSX-6	DPDT	6 DC	40	11.00
W78RCSX-7	DPDT	12 DC	160	11.00
W78RCSX-8	DPDT	24 DC	650	11.00
W78RCSX-9	DPDT	48 DC	2600	11.00
W78RCSX-10	DPDT	110 DC	11,000	13.22
W78CSX-1	4PDT	6 DC	40	10.11
W78CSX-2	4PDT	12 DC	160	10.11
W78CSX-3	4PDT	24 DC	650	10.11
W78CSX-6	4PDT	110 DC	11,000	12.33
W78RCSX-97	SPDT	12 DC	160	9.63

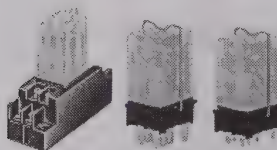
PRINTED CIRCUIT TERMINALS

W78ARPCX-5	DPDT	120 AC	4400	\$11.57
W78ARPCX-6	DPDT	240 AC	18,790	14.47
W78APCX-3	4PDT	24 AC	180	10.11
W78APCX-5	4PDT	120 AC	4400	10.66
W78RPCX-1	DPDT	6 DC	40	11.00
W78RPCX-2	DPDT	12 DC	160	11.00
W78RPCX-3	DPDT	24 DC	650	11.00
W78PCX-2	4PDT	12 DC	160	10.11
W78PCX-3	4PDT	24 DC	650	10.11
W78RPCX-79	SPDT	12 DC	160	9.63
W78PCX-6	4PDT	110 DC	11,000	12.33

SOCKETS FOR CLASS 78 RELAYS



78-378 78-379 78-399

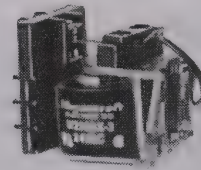


78-400 78-401 78-402

Available in screw, solder or P.C. type for SPDT, DPDT or 4PDT relays. All are UL recognized. File No. E70550 and CSA certified: screw type. File No. LR35144: solder and P.C. types. File No. LR29513. Hold-down clip included with socket.

Mfr. Number	Type	Relay Type	Price Each
70-378-1	Solder	4PDT	\$ 2.02
70-379-1	P.C.	4PDT	2.02
70-461	Screw	4PDT	16.73
70-459	Screw	SPDT, DPDT	12.36
70-401	Solder	SPDT, DPDT	3.21
70-402	P.C.	SPDT, DPDT	3.06

CLASS 250 OPEN TYPE RELAYS



Class 250 U.L. Recognized (File No. E43641) and CSA certified (File No. LR37547) continuous duty general purpose relays are designed for maximum efficiency and reliable performance at lowest cost. Contacts are silver alloy, gold flashed. See contact ratings at bottom of page. Open type relays have quick-connect (.110" x .032") or axial type solder lugs for easy wiring. Single 6-32 tapped mounting hole with locating boss for easy mounting. Size, 1²⁷/₃₂" L x 1⁷/₁₆" W x 1¹/₁₆" H.

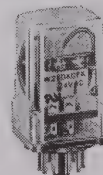
AC VOLTAGE SPECIFIED

Mfr. Number	Con-tacts	Coil*		Price Each
		Volts	Ohms	
W250AX-3	SPDT	24	.....	\$12.92
W250AX-4	SPDT	120	.....	13.58
W250AX-9	DPDT	120	.....	16.01
W250AX-14	3PDT	120	.....	20.04

DC VOLTAGE SPECIFIED

Mfr. Number	Con-tacts	Coil*		Price Each
		Volts	Ohms	
W250X-3	SPDT	24	470	\$12.23
W250X-6	DPDT	12	120	15.49
W250X-7	DPDT	24	470	15.49
W250X-10	3PDT	12	120	18.72

CLASS 250CP ENCLOSED PLUG-IN RELAYS



Class 250 CP low cost UL Recognized and CSA Certified continuous duty, general purpose relays are similar to Class 250, but utilize plastic dust cover and plug-in base. SPDT and DPDT contacts have 8-pin octal plug-in bases and 3PDT types use 11-pin plug-in bases. Size, 1¹/₁₆" x 2⁹/₁₆".

Mr. Number	Con- tacts	Coil*		Price Each
		Volts	Ohms	
AC VOLTAGE SPECIFIED				
W250ACPX-3	SPDT	24	.....	\$17.76
W250ACPX-4	SPDT	120	.....	18.42
W250ACPX-8	DPDT	24	.....	20.93
W250ACPX-9	DPDT	120	.....	21.74
W250ACPX-10	DPDT	240	.....	22.09
W250ACPX-13	3PDT	24	.....	26.68
W250ACPX-14	3PDT	120	.....	27.46
W250ACPX-15	3PDT	240	.....	27.81

DC VOLTAGE SPECIFIED

W250CPX-2	SPDT	12	120	\$17.09
W250CPX-3	SPDT	24	470	17.09
W250CPX-6	DPDT	12	120	20.52
W250CPX-7	DPDT	24	470	20.52
W250CPX-10	3PDT	12	120	26.04
W250CPX-11	3PDT	24	470	26.04

CLASS 250 CONTACT RATINGS (ALL STYLES)

SPDT Res. rated 12A at 120/240VAC; DPDT Res. rated 12A at 120VAC or 8A at 240VAC; 3PDT Res. rated 10A at 120VAC or 6A at 240VAC. All contact combinations also Res. rated 10A at 28VDC, 1/2 hp at 120VAC, 1/4 hp at 240 VAC.

*COIL DATA

Voltage shown is nominal. Pull-in at 80% of nominal or less for DC relays; 85% of nominal for AC relays at 25°C. Resistance shown is ± 10% at 25°C. Nominal coil power, 1.2W for DC relays; 2.0 VA for 1 and 2 pole AC relays; 2.75 VA for 3 pole AC relays.

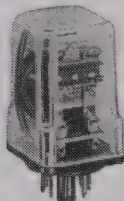
GENERAL PURPOSE RELAYS



CLASS 88



CLASS 88CP



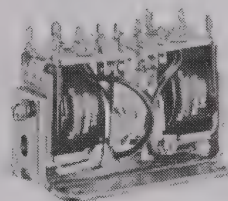
CLASS 88ANCP



CLASS 88UKD



CLASS 88KD



CLASS 88L



CLASS 88HP

CLASS 88 GENERAL PURPOSE RELAYS

Reliable, general purpose relays have glass melamine insulation for high dielectric strength and resistance to humidity or temperature change. **Contact Arrangement:** SPDT, DPDT, or 3 PDT standard. **Contact Material:** Silver cadmium oxide, gold flashed, $\frac{1}{16}$ " dia. **Dielectric Strength:** 1000V rms between mutually insulated conductive elements. **Terminals:** Solder type standard; will also accept AMP "Faston" quick-connect receptacles (Series 110 or equivalent). **Mounting:** Open style—one 6-32 threaded mounting hole with locating lug. **Weight:** Open style, 2 ozs.; dust covered, 3 ozs.

Mfr. No.	Contacts	Volts or Current†	Res., Ohms§	Nom. Power	Price Each
W88AX-4	SPDT	120 VAC	.....	3 VA	\$14.78
W88AX-8	DPDT	120 VAC	.....	3 VA	17.82
W88AX-12	3PDT	120 VAC	.....	3 VA	21.88
W88X-7	DPDT	12 VDC	120	1.2 W	18.06
W88X-8	DPDT	24 VDC	470	1.2 W	18.06
W88X-9	DPDT	110 VDC	10000	1.2 W	19.57

CLASS 88CP ENCLOSED GENERAL PURPOSE RELAYS

Same as Class 88, except octal plug-in with see-thru plastic dust cover.

Mfr. No.	Contacts	Volts or Current†	Res., Ohms§	Nom. Power	Price Each
W88ACPX-4	SPDT	120 VAC	.....	3 VA	\$22.31
W88ACPX-7	DPDT	24 VAC	.....	3 VA	25.02
W88ACPX-8	DPDT	120 VAC	.....	3 VA	25.02
W88ACPX-11	3PDT	24 VAC	.....	3 VA	30.97
W88ACPX-12	3PDT	120 VAC	.....	3 VA	30.97
W88AHPX-24	DPDT	120 VAC	.....	3 VA	60.36
W88AHPX-36	3PDT	120 VAC	.....	3 VA	75.31
W88CPX-2	SPDT	12 VDC	120	1.5 W	20.82
W88CPX-6	DPDT	12 VDC	120	1.5 W	24.31
W88CPX-7	DPDT	24 VDC	470	1.5 W	24.31
W88CPX-10	3PDT	12 VDC	120	1.5 W	29.55
W88CPX-11	3PDT	24 VDC	470	1.5 W	29.55
W88CPX-16*	DPDT	10mA*	2500	250 mW	27.72
W88CPX-18*	DPDT	5 mA*	10000	250 mW	29.90

*DC current actuated for electronic circuit operation; all others are voltage actuated. †Voltage shown is nominal. Pull-in at 80% of nominal or less for DC relays; 85% of nominal or less for AC relays. §Resistance shown is $\pm 10\%$ at 25°C.

SOCKETS FOR CLASS 88 RELAYS

Heavy duty, molded thermoplastic, screw terminal sockets have closed back construction and require no separate insulation. Mounting hardware not included. UL recognized. File No. E70550. CSA certified. File No. LR29513.

Mfr. No.	Type	Weight (Grams)	Price Each
70-169-1	8-Pin octal	28.3	\$ 9.28
70-233-1	11-Pin*	75	19.67
70-170-1	11-Pin octal	54.6	16.30

*Accepts Class 388 relays.

DIN MOUNTED SOCKETS

Mfr. No.	Type	Weight (Grams)	Price Each
70-464-1	8-Pin octal	23.8	\$ 7.70
70-465-1	11-Pin octal	75	12.92

CLASS 88UKD OPEN RELAYS

30 amps (SPST-NO-DM), DC or AC operation. Quick-connect and or solder terminals. High current switching in minimum space. 1 hp up to 600VAC. **Contact Rating:** 30A up to 300VAC or 28VDC, resistive load; 5A at 600VAC resistive load; 1 hp at 120-600VAC, motor load. **Contact Material:** Silver alloy, gold flashed. Other specifications same as Class 88. UL E43641, CSA LR37547.

Mfr. No.	Contacts	Volts	Res., Ohms§	Nom. Power	Price Each
W88UKADX-3	SPST-NO-DM	24 VAC	.....	3 VA	\$15.78
W88UKADX-4	SPST-NO-DM	120 VAC	.....	3 VA	15.78
W88UKADX-5	SPST-NO-DM	240 V, 60 Hz	.....	3 VA	16.42
		220 V, 50 Hz			
W88UKDX-2	SPST-NO-DM	12 VDC	100	1.5 W	14.57
W88UKDX-3	SPST-NO-DM	24 VDC	400	1.5 W	14.57
W88UKDX-4	SPST-NO-DM	110 VDC	8000	1.5 W	16.20

CLASS 88KD OPEN RELAYS

Similar to Class 88 UKD.

Mfr. No.	Contacts	Volts	Res., Ohms§	Nom. Power	Price Each
W88KADX-2	SPST-NO-DM	120 VAC	.....	3 VA	\$15.87
W88KDX-2	SPST-NO-DM	12 VDC	100	1.5 W	14.53
W88KDX-3	SPST-NO-DM	24 VDC	400	1.5 W	14.53

CLASS 88ANCP OCTAL PLUG-IN W/NEON LIGHT

Same as Class 88CP, but with neon light to indicate when energized.

Mfr. No.	Type	Contacts	Volts	Res., Ohms§	Nom. Power	Price Each
W88ANCPX-2	8-pin	DPDT	120 VAC	.....	3 VA	\$40.69
W88ANCPX-3	11-pin	3PDT	120 VAC	.....	3 VA	49.46

CLASS 88L OPEN STYLE LATCHING RELAYS

Mfr. No.	Type	Contacts	Volts	Res., Ohms§	Nom. Power	Price Each
W88ALX-4		4PDT	120 VAC	.....	6 VA	\$66.04

CLASS 88HP HERMETICALLY SEALED PLUG-IN RELAYS

Octal style plug-in relays in DPDT or 3PDT, 10 amps for DC or AC operation (50/60 Hz). Similar to Class 88, except housed in a metal enclosure with heavy glass to metal plug pins. 8 or 11 pin octal style plug. Plug mates with Magnecraft Type 70-169 or 70-170-1 sockets. **Weight:** 5 ozs.

Mfr. No.	Type	Contacts	Volts	Res., Ohms§	Nom. Power	Price Each
W88HPX-33	8-pin	DPDT	12 VDC	100	1.5 W	\$59.08
W88HPX-34	8-pin	DPDT	24 VDC	400	1.5 W	59.08
W88HPX-51	11-pin	3PDT	24 VDC	400	1.5 W	74.62

§Resistance shown is $\pm 10\%$ at 25°C.

GENERAL PURPOSE RELAYS



388 Open Type



388CQ



388 CP



388 CPC



388VCK

Low cost, general purpose relay designed to UL and CSA standards. Coil bobbin skirt provides improved barrier of insulation between coil terminals and frame. Arc barriers between adjacent poles of the relay are molded internally and externally on the relay base.

CLASS 388 OPEN TYPE RELAYS, SPDT, DPDT, 3PDT

AC and DC operation, 3-way terminals, lug-in, solder $\frac{3}{16}$ " $\times$.020" quick connect. SPDT, DPDT, 3PDT silver alloy, gold flashed contacts rated as shown above at 28VDC, or 120/240VAC resistive load. Also $\frac{1}{2}$ H.P. at 120 VAC or $\frac{1}{2}$ H.P. at 240VAC, motor load. Dielectric withstanding voltage of 500V rms between open contacts; 2000V rms between all other elements. Nominal power for AC, 2.5VA approx.; for DC, 1.2 watts. Size $1\frac{29}{32}$ " $\times$ $1\frac{19}{32}$ " $\times$ $2\frac{1}{4}$ ". Weight, 2.3 oz.

Mr. Number	Con-tacts	Coil*		Price Each
		Volts	Ohms	
W388AX-3	SPDT	24 VAC	.....	\$11.22
W388AX-4	SPDT	120 VAC	.....	11.22
W388AX-8	DPDT	24 VAC	.....	13.98
W388AX-9	DPDT	120 VAC	.....	13.98
W388AX-14	3PDT	120 VAC	.....	16.99
W388X-7	DPDT	24 VDC	470	12.83

CLASS 388CP ENCLOSED PLUG-IN RELAYS

AC and DC operation, SPDT, DPDT, 3PDT, silver alloy, gold flashed contacts rated as shown above at 28VDC or 120/240VAC, resistive load. Also $\frac{1}{2}$ H.P. at 240VAC, motor load. Nominal power, AC, 2.5VA, approx.; DC, 1.2 watts. Dielectric withstanding voltage of 500V rms between open contacts; 2000Vrms between all other elements. .187" $\times$.020" quick connect terminals with solder hole. Plug-in mounting mates with screw terminal sockets or nylon sockets shown on another page. Tough, clear, crackproof cover. Size, $1\frac{17}{32}$ " $\times$ $1\frac{13}{32}$ " $\times$ $1\frac{29}{32}$ ", overall. Weight, 3 oz.

Mr. Number	Con-tacts	Coil*		Price Each
		Volts	Ohms	
W388ACPX-3	SPDT	24 VAC	.....	\$11.57
W388ACPX-4	SPDT	120 VAC	.....	11.57
W388ACPX-5	SPDT	240 VAC	.....	12.63
W388ACPX-8	DPDT	24 VAC	.....	14.36
W388ACPX-9	DPDT	120 VAC	.....	14.36
W388ACPX-10	DPDT	240 VAC	.....	15.54
W388ACPX-13	3PDT	24 VAC	.....	17.23
W388ACPX-14	3PDT	120 VAC	.....	17.23
W388ACPX-15	3PDT	240 VAC	.....	18.07
W388CPX-2	SPDT	12 VDC	120	10.76
W388CPX-3	SPDT	24 VDC	470	10.76
W388CPX-6	DPDT	12 VDC	120	13.26
W388CPX-7	DPDT	24 VDC	470	13.26
W388CPX-8	DPDT	110 VDC	10000	14.80
W388CPX-10	3PDT	12 VDC	120	15.77
W388CPX-11	3PDT	24 VDC	470	15.77

15 AMP "J" STYLE

W388AJCPX-8	DPDT	24	.....	\$14.64
W388AJCPX-14	3PDT	120	.....	17.81

CLASS 388CPC ENCLOSED PRINTED CIRCUIT RELAYS

AC and DC operation SPDT, DPDT, 3PDT silver alloy, gold flashed contacts. Contact ratings same as Class 388CP.

Mr. Number	Con-tacts	Coil*		Price Each
		Volts	Ohms	
W388ACPCX-14	3PDT	120 VAC	.....	\$19.29
W388CPCX-7	DPDT	24 VDC	470	14.63

CLASS 388CQ ENCLOSED FLANGE-MOUNT RELAYS

AC and DC operation, SPDT, DPDT, 3PDT silver alloy, gold flashed contacts rated at 28VDC or 120/240VAC resistive load. Also $\frac{1}{2}$ H.P. at 120VAC or $\frac{1}{2}$ H.P. at 240VAC, motor load. Dielectric withstanding voltage of 500Vrms between open contacts; 2000Vrms between all other elements. Nominal power, AC, 2.5VA, approx.; DC, 1.2 watts. Solder or $\frac{3}{16}$ " $\times$.020" quick connect terminals. Tough, clear, crackproof cover with flange mount. Size, $1\frac{17}{32}$ " $\times$ $1\frac{13}{32}$ " $\times$ $2\frac{29}{32}$ ", overall. Weight, 3 oz.

Mr. Number	Con-tacts	Coil*		Price Each
		Volts	Ohms	
W388ACQX-4	SPDT	120 VAC	.....	\$11.57
W388ACQX-5	SPDT	240 VAC	.....	12.63
W388ACQX-9	DPDT	120 VAC	.....	14.36
W388ACQX-10	DPDT	240 VAC	.....	15.54
W388ACQX-14	3PDT	120 VAC	.....	17.23
W388ACQX-15	3PDT	240 VAC	.....	18.07
W388CQX-2	SPDT	12 VDC	120	10.76
W388CQX-3	SPDT	24 VDC	470	10.76
W388CQX-6	DPDT	12 VDC	120	13.26
W388CQX-7	DPDT	24 VDC	470	13.26
W388CQX-11	3PDT	24 VDC	470	15.77

CLASS 388MLCP BI-STABLE MAGNETIC LATCHING RELAYS

Specifications same as Class 388, except choice of enclosure or flange mount and choice of solder or printed circuit terminals. DPDT relays are UL recognized for 600VAC at 3 amps. Choice of DC single coil in 1 Form C or 2 Form C, DC dual coil in 2 Form C, or AC coil in 1 Form C or 2 Form C.

Mr. No.	Nom. Voltage	Coil*		Contacts	Nominal Power	Price Each
		Ohms	Config.			
W388MLCPX-6	12VDC	120	Single	DPDT	1.2W	\$35.43
W388MLCPX-7	24VDC	470	Single	DPDT	1.2W	35.43
W388AMLCPX-9	120VAC	10,000	Single	DPDT	.8VA	36.55
W388ML2CPX-6#	12VDC	88/88	Dual	DPDT	1.64W	36.10
W388ML2CPX-7	24VDC	350/350	Dual	DPDT	1.64W	36.10

#Dual coil relays are not CSA certified.

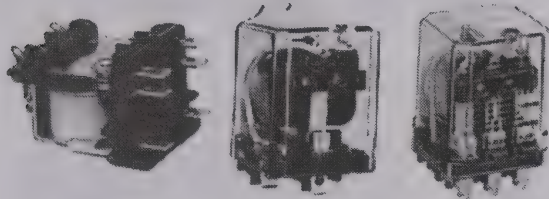
CLASS 388VCK WORLD CLASS RELAYS

UL, CSA, and VDE triple agency approval in one relay. AC and DC operation SPDT, DPDT and 3PDT silver cadmium gold flashed contacts. VDE rated 10A at 250 VAC resistive and 4A at 250 VAC inductive. UL and CSA rated $\frac{1}{2}$ HP at 120 VAC or $\frac{1}{2}$ HP at 240 VAC motor load; 13A for SPDT, 12A for DPDT, 11A for 3PDT at 120 VAC, 28 VDC resistive load. DPDT only also has 3A at 301-600 VAC resistive load and $\frac{1}{2}$ HP at 301-600 VAC motor load. CSA 240 VAC resistive rating is 10A (1, 2 poles), 6A (3 poles). Dielectric is the same as Class 388CQ. Terminals are $\frac{3}{16}$ " $\times$.032" QC/solder type, pierced and solder tinned for alternate direct solder connections. Flange mounting requires one screw at each flange. An extra insulator is added between the coil and relay frame to meet VDE requirements.

Mr. No.	Con-tacts	Coil*		Nom. Power	Price Each
		Volts	Ohms		
W388VACKX-5	SPDT	120 VAC	.....	2.0VA	\$13.11
W388VACKX-6	SPDT	220 VAC	.....	2.0VA	13.59
W388VACKX-11	DPDT	120 VAC	.....	2.0VA	16.19
W388VACKX-12	DPDT	220 VAC	.....	2.0VA	16.71
W388VACKX-17	3PDT	120 VAC	.....	2.0VA	19.39
W388VACKX-18	3PDT	220 VAC	.....	2.0VA	19.71
W388VCKX-3	SPDT	24 VDC	470	1.2W	12.72
W388VCKX-8	DPDT	24 VDC	470	1.2W	15.83
W388VCKX-13	3PDT	24 VDC	470	1.2W	18.75

*Resistance values $\pm 10\%$, measured at 25°C. Voltage specified relays pull in at 75% of nominal or less for DC relays and 85% of nominal or less for AC relays, at 25°C.

GENERAL PURPOSE RELAYS



Class 389DZ

Class 389C

Class 389CPC

CLASS 389 GENERAL PURPOSE RELAYS

Inexpensive, general purpose relays designed to switch higher contact loads without an increase in overall size. Single-make contact types are available with one, two, or three poles. Double make and double break types are available with only one pole but are capable of switching larger loads, such as motor starting, and are also available with an extra terminal that connects to the movable contact member. Contacts: SPDT, DPDT, 3PDT, SPST-NO-DM, SPST-NC-DB, and SPDT-NC-NO (DB-DM) are available. **Contact Material:** Silver cadmium oxide, gold flashed, 1/4 diameter. **Contact Ratings:** See table. **Terminals:** 1/4 x .032" quick-connect type, also suitable for solder connections; CPC types have printed-circuit terminals. **Operating Temperature Range:** -30°C to +50°C for AC relays; -30°C to +60°C for DC relays. **Weight:** 2.75 ozs. without cover; 3.3 ozs. with cover. Available with flange mount cover as standard; without cover on special order. UL File No. E43641, CSA File No. LR37547.

Mfr. No.	Contacts	Coil		Price Each
		Volts†	Ohms*	
W389ACX-4	SPDT	120 AC	.....	\$14.37
W389ACX-8	DPDT	24 AC	.....	17.21
W389ACX-9	DPDT	120 AC	.....	17.87
W389ACX-10	DPDT	240 AC	.....	19.69
W389ACX-14	3PDT	120 AC	.....	21.63
W389ACX-15	3PDT	240 AC	.....	22.15
W389ADCX-4	SPST-NO-DM	120 AC	.....	14.52
W389ADCX-5	SPST-NO-DM	240 AC	.....	15.04
W389ADZCX-3	SPDT-NC-NO(DB-DM)	24 AC	.....	17.40
W389ADZCX-4	SPDT-NC-NO(DB-DM)	120 AC	.....	17.40
W389CX-2	SPDT	12 DC	100	12.87
W389CX-3	SPDT	24 DC	400	13.20
W389CX-7	DPDT	12 DC	100	16.38
W389CX-8	DPDT	24 DC	400	17.12
W389CX-12	3PDT	12 DC	100	20.06
W389CX-13	3PDT	24 DC	400	20.33
W389DCX-2	SPST-NO-DM	12 DC	100	13.89
W389DCX-3	SPST-NO-DM	24 DC	400	14.24
W389DZCX-2	SPDT-NC-NO(DB-DM)	12 DC	100	16.14
W389DZCX-3	SPDT-NC-NO(DB-DM)	24 DC	400	16.45

* Resistance values ±10% measured at 25° C.

† Voltage specified relays pull in at 80% of nominal or less for DC relays and 85% of nominal or less for AC relays, at 25° C.

CONTACT RATINGS

No. of Poles	Amps H.P.	Lead Voltage	Hertz or DC	Type of Load
CLASS 389 ENCLOSED STYLE				
1	13A	28	DC	Resistive
	20A	15	DC	Resistive
	25A	300	50/60 Hz	Resistive
	5A	600	50/60 Hz	Resistive
	1 HP	120	50/60 Hz	Motor
	1½ HP	208/240	50/60 Hz	Motor
	1 HP	480/600	50/60 Hz	Motor
	660VA	120	50/60 Hz	Pilot Duty
	915VA	208	50/60 Hz	Pilot Duty
	960VA	240	50/60 Hz	Pilot Duty
	765VA	480/600	50/60 Hz	Pilot Duty
	B600•		50/60 Hz	Pilot Duty
2	13A	28	DC	Resistive
	20A	15	DC	Resistive
	25A	300	50/60 Hz	Resistive
	5A	600	50/60 Hz	Resistive
	1 HP	120	50/60 Hz	Motor
	1½ HP	208/240	50/60 Hz	Motor
	1 HP	480/600	50/60 Hz	Motor
	660VA	120	50/60 Hz	Pilot Duty
	915VA	208	50/60 Hz	Pilot Duty
	960VA	240	50/60 Hz	Pilot Duty
	765VA	480/600	50/60 Hz	Pilot Duty
	B600•		50/60 Hz	Pilot Duty
3	13A	28	DC	Resistive
	20A	15	DC	Resistive
	20A	150	50/60 Hz	Resistive
	15A■	250	50/60 Hz	Resistive
	10A†	300	50/60 Hz	Resistive
	½ HP	120	50/60 Hz	Motor
	½ HP	208/240	50/60 Hz	Motor
	470VA	120/240	50/60 Hz	Pilot Duty
	445VA	208	50/60 Hz	Pilot Duty
	B300•		50/60 Hz	Pilot Duty

CLASS 389D ENCLOSED STYLE

1	30A	28	DC	Resistive
	30A	300	50/60 Hz	Resistive
	10A	600	50/60 Hz	Resistive
	1 HP	120	50/60 Hz	Motor
	1½ HP	200 thru 600	50/60 Hz	Motor
	765VA	120	50/60 Hz	Pilot Duty
	915VA	208	50/60 Hz	Pilot Duty
	960VA	240/480/600	50/60 Hz	Pilot Duty
	A600•		50/60 Hz	Pilot Duty

■ Not CSA. Ratings with (■) are UL appliance rated.

† CSA rating only. Not UL.

•NEMA PILOT DUTY RATING CODE FOR AC CONTROL-CIRCUIT CONTACTS AT 50/60 Hz

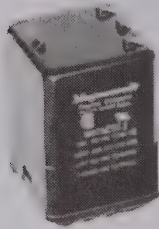
Code Designation	Test Current	Maximum Current, Amperes			
		120 Volt		240 Volt	
		Make	Break	Make	Break
A600	10A	60	6.00	30	3.00
B300	5A	30	3.00	15	1.50
B600	5A	30	3.00	15	1.50

480 Volt		600 Volt		Maximum Volt-amperes	
Make	Break	Make	Break	Make	Break
15	1.50	12	1.20	7200	720
7.5	0.75	6	0.06	3600	360

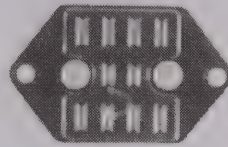
**CONSULT OUR STAFF OF
ELECTRONICS EXPERTS ON ALL YOUR SPECIAL
EQUIPMENT OR COMPONENT NEEDS.**

POWER RELAYS

CLASS 97 ENCLOSED PLUG-IN OR STUD-MOUNTING 25 AMP POWER RELAYS



Class 97

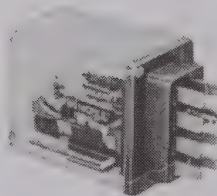


70-312 Socket

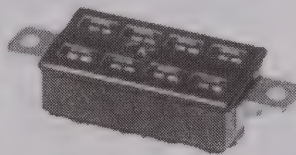
Class 97 is a low cost 25 amp relay for 1 or 2 pole, 120/240VAC applications. Available with socket for plug-in applications or for use with standard quick-connect terminals for simplicity and ease in wiring. Class 97 relays offer high quality, dependable performance and long life. Ideal for use in appliances, automation equipment, motor starting and heater circuits, clock controlled systems, laundry equipment, vending machines, machine tools, furnace controls, panel boards and air conditioners. Holding circuit permits sustaining operation of the relay from momentary switches, without sacrificing one of the heavy duty load contacts where the coil voltage may be different from the load circuit voltage. UL File No. E43641

Mfr. Number	Coil*		Price Each
	Volts	Ohms	
STUD MOUNTING TYPE			
W97ACSX-3	120 VAC	.....	\$110.19
W97ACSX-4	240 VAC	.....	110.19
W97CSX-1	12 VDC	56.8	105.76
W97CSX-2	24 VDC	245	105.76
PLUG-IN TYPE (NO STUD)			
W97ACPX-2	120 VAC	.....	\$102.97
W97ACPX-3	120 VAC	.....	102.97
W97ACPX-4	240 VAC	.....	102.97
W97CPX-1	12 VDC	50	100.30
W97CPX-2	24 VDC	200	100.30

CLASS 21 TRAFFIC CONTROL RELAY



21ACPX



70-446 Socket

For vehicular traffic control systems. Conforms to item 10.5.3 flash transfer relay and the provisions in Chapter 17 of the Federal Highway Specification FHWA-1P-78-16, "Heavy Duty Relays, Model 430." **Contact Ratings:** 30 Amps at 120/240VAC; 20 Amps at 28VDC; 1 HP at 120VAC; 2 HP at 240VAC; 2.4 kW at 120/240VAC; 20 Amps tungsten lamp. **Coils:** Available up to 240VAC or 110VDC. **Terminals:** Jones plug terminals .250" x .530" x .060". **Weight:** 7 ozs. **Size:** 3 1/8" H x 2 7/8" W x 1 3/4" D.

Mfr. Number	Contacts	Coil Volts	Coil Power	Price Each
W21ACPX-2	DPDT	120 AC	8 VA	\$75.18
W21ACPD-5	DPDT	120 VA	4 VA*	77.57
W21ACQX-4	DPDT	120 VAC	8 VA	65.91
W21ACQX-5	DPDT	240 VAC	8 VA	69.74

*Rectified.

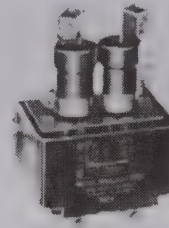
SOCKET FOR CLASS 21 RELAY

Mfr.	Description	Price Each
70-446	8-contact socket with angle bracket and ground terminal	\$15.78

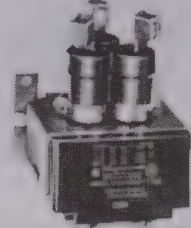
MERCURY DISPLACEMENT POWER RELAYS



SPST



DPST



3PST

STEEL TUBE MERCURY DISPLACEMENT RELAYS

Hi-power 35 and 60 amp SPST, DPST, 3PST, N.O. or N.C. mercury relay with steel tube design. Hermetically sealed and pressurized with inert gas for rapid arc suppression. **Contact Arrangement:** Mercury to metal. **Contact Resistance:** .003 ohm. **Temperature Range:** -35° to 60°C except time delay versions, -10°C to +55°C. UL and CSA Listed except time delay versions.

Mfr. Number	Contacts	Coil Voltage	Price Each
30 AMP CONTACTS			
WM35A-120A	SPST-NO	120 VAC	\$ 30.74
WM35AA-120A	DPST-NO	120 VAC	57.69
WM35AAA-120A	3PST-NO	120 VAC	82.28
WM35A-240A	SPST-NO	240 VAC	31.77
WM35AA-240A	DPST-NO	240 VAC	59.12
WM35AAA-240A	3PST-NO	240 VAC	82.88
WM35A-24D	SPST-NO	24 VDC	30.94
WM35AA-24D	DPST-NO	24 VDC	57.69
WM35AAA-24D	3PST-NO	24 VDC	82.28
WM35B-120A	SPST-NC	120 VAC	43.73
60 AMP CONTACTS			
WM60A-120A	SPST-NO	120 VAC	\$ 47.83
WM60AA-120A	DPST-NO	120 VAC	90.14
WM60AAA-120A	3PST-NO	120 VAC	129.75
WM60A-240A	SPST-NO	240 VAC	48.89
WM60AA-240A	DPST-NO	240 VAC	92.03
WM60AAA-240A	3PST-NO	240 VAC	130.55
WM60A-24D	SPST-NO	24 VDC	47.83
WM60AA-24D	DPST-NO	24 VDC	90.14
WM60AAA-24D	3PST-NO	24 VDC	129.75
WM60B-120A	SPST-NC	120 VAC	58.98
100 AMP CONTACTS			
WM100A-24D	SPST-NO	24 VDC	\$124.91
WM100A-120A	SPST-NO	120 VAC	124.91
WM100A-240A	SPST-NO	240 VAC	125.55

CLASS WML35 AND WML60 RECOMMENDED FOR MUCH LONGER LIFE ON RESISTIVE AND TUNGSTEN LOADS ON AC POWER ONLY

Mfr. Number	Contacts	Coil Voltage	Price Each
35 AMP CONTACTS			
WML35A-120A	SPST-NO	120 VAC	\$ 30.94
WML35A-240A	SPST-NO	240 VAC	31.77
WML35AA-120A	DPST-NO	120 VAC	57.69
WML35AA-240A	DPST-NO	240 VAC	59.12
WML35AAA-120A	3PST-NO	120 VAC	82.28
WML35AAA-240A	3PST-NO	240 VAC	82.88
60 AMP CONTACTS			
WML60A-120A	SPST-NO	120 VAC	\$ 47.83
WML60A-240A	SPST-NO	240 VAC	48.89
WML60AA-120A	DPST-NO	120 VAC	90.14
WML60AA-240A	DPST-NO	240 VAC	92.03
WML60AAA-120A	3PST-NO	120 VAC	129.75
WML60AAA-240A	3PST-NO	240 VAC	130.55

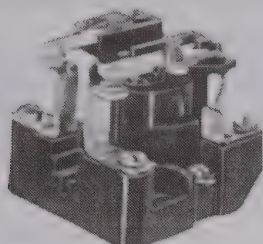
CLASS 30/30L MERCURY DISPLACEMENT POWER RELAYS

Relays for resistive, tungsten and motor loads with AC or DC power. Single pole, N.O. contacts, rated 30A. Screw terminals on top. ML30 is for much longer life on resistive and tungsten loads. For AC power only. UL listed, File Nos. E52197 & E43641. CSA certified, File Nos. LR27611 & LR41729.

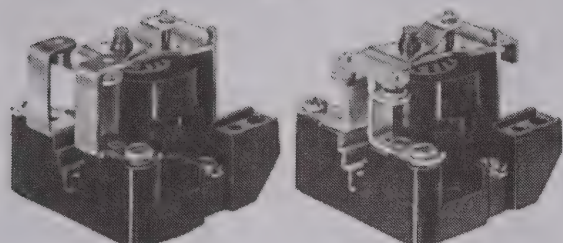
Mfr. Number	Coil			Price Each
	Voltage	Current	Ohms	
WM30A-120A	120 VAC	.058 A	700	\$30.15

POWER RELAYS

CLASS 199 HEAVY DUTY POWER RELAYS



Class 199



Class 199DY

Class 199D

Rugged, precision-built for extra long life and maximum contact effectiveness. Dimensionally interchangeable with other power relays of the clapper type. Heavy duty plastic base and molded contact barrier mounted to armature for high insulation resistance. Positive contact wiping action. Heavy duty screw terminals. Molded coil bobbin. **Contacts:** Silver alloy, $\frac{1}{16}$ " dia., gold flashed. Choice of SPDT, DPDT, DPST-NO, SPST-NO and SPST-NC. **Size:** SPDT 30-amp, $2\frac{1}{2}$ " sq. $\times$ $2\frac{1}{16}$ " H; DPDT 30-amp, $2\frac{1}{2}$ " W $\times$ $3\frac{1}{4}$ " D $\times$ $2\frac{1}{16}$ " H; DPST-NO 30-amp, $2\frac{1}{2}$ " sq. $\times$ $2\frac{1}{4}$ " H; SPST-NO-DM and SPST-NC-DB 50-amp, $2\frac{1}{2}$ " W $\times$ $3\frac{1}{2}$ " D $\times$ $2\frac{1}{16}$ " H, SPST-NO-DM 30-amp, $2\frac{1}{2}$ " sq. $\times$ $2\frac{1}{16}$ " H.

CLASS 199 HEAVY DUTY POWER RELAYS UL LISTED AND CSA CERTIFIED

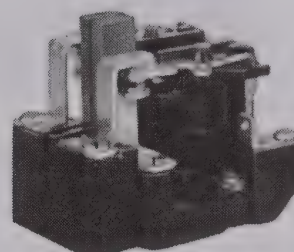
Mfr. Number	Contacts		Coil Data*		Price Each
	Configuration	Rating	Volts	Ohms	
W199AX-4	SPDT	30 A	120 VAC	.....	\$20.67
W199X-2	SPDT	30 A	12 VDC	70	19.91
W199X-3	SPDT	30 A	24 VDC	290	19.91
W199AX-8	DPST-NO	30 A	24 VAC	.....	22.50
W199AX-9	DPST-NO	30 A	120 VAC	.....	22.50
W199AX-10	DPST-NO	30 A	240 VAC	.....	22.97
W199X-7	DPST-NO	30 A	12 VDC	70	21.90
W199X-8	DPST-NO	30 A	24 VDC	290	21.90
W199AX-13	DPDT	30 A	24 VAC	.....	28.48
W199AX-14	DPDT	30 A	120 VAC	.....	28.48
W199AX-15	DPDT	30 A	240 VAC	.....	28.96
W199X-11	DPDT	30 A	6 VDC	18	27.80
W199X-12	DPDT	30 A	12 VDC	70	27.80
W199X-13	DPDT	30 A	24 VDC	290	27.80
W199X-14	DPDT	30 A	110 VDC	6000	29.76
W199ADX-4	SPST-NO-DM	30 A	120 VAC	.....	19.88
W199ADX-5	SPST-NO-DM	30 A	240 VAC	.....	20.34
W199DX-2	SPST-NO-DM	30 A	12 VDC	70	19.16
W199DX-3	SPST-NO-DM	30 A	24 VDC	290	19.16
W199ADEX-4#	SPST-NO-DM	50 A	120 VAC	.....	25.97
W199DEX-3#	SPST-NO-DM	50 A	24 VDC	290	25.97
W199DYX-2	SPST-NC-DB	30 A	12 VDC	70	22.64

#With compression type terminals.

* Voltage shown is nominal. Pull-in at 80% of nominal or less for DC relays; 85% of nominal for AC relays at 25°C. Resistance shown is $\pm 10\%$ at 25°C.

†Not UL or CSA.

CLASS 199B HEAVY DUTY POWER RELAYS WITH BLOWOUT MAGNET FOR DC ARC-QUENCHING



Class 199B

Nominal power, AC, 10VA; DC, 2.0 watts. Size, 199B, $\frac{1}{8}$ " $\times$ $2\frac{1}{2}$ " $\times$ $2\frac{1}{16}$ " H.; 199DB, $2\frac{1}{2}$ " $\times$ $2\frac{1}{16}$ " $\times$ $2\frac{1}{16}$ " H.

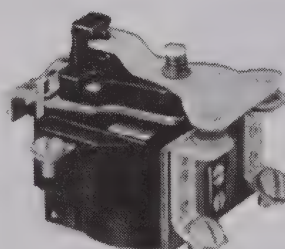
Mfr. Number	Contacts		Coil Data*		Price Each
	Configuration	Rating†	Volts	Ohms	
W199ADB-X-4	SPST	20 A	120 VAC	.....	\$25.59
W199ABX-14†	DPDT	10 A	120 VAC	.....	34.73
W199BX-14†	DPDT	10 A	110 VAC	6000	34.82

†At 110VDC; higher voltages at lower currents.

* Voltage shown is nominal. Pull-in at 80% of nominal or less for DC relays; 85% of nominal for AC relays at 25°C. Resistance shown is $\pm 10\%$ at 25°C.

†Not UL or CSA.

CLASS 199SD SPACE SAVER POWER RELAYS



Class 199SD



Class 199S

Double-make contacts, SPST-NO-DM, rated 30 amps continuous; 50 amps intermittent. Screw type terminals. **Contact Material:** Silver cadmium oxide, gold flashed, $\frac{1}{16}$ " dia. **Dielectric Withstanding Voltage:** 1500V rms between mutually insulated conductive elements. **Size:** 2.187 " W $\times$ 2.5 " L $\times$ $\pm .938$ " H. **Weight:** 6 ozs.

Mfr. No.	Coil		Price Each
	Volts	Ohms	
W199SDX-2	12 VDC	70	\$32.29
W199SDX-3	24 VDC	290	32.29

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SIP/DIP RELAYS

CLASS 117 SIP RELAYS



Contacts rated 10VA max. resistive load: 100 VDC or 130VAC max. switching volts: 0.5A max. switching current. 1.5A carry current.

Mfr. Number	Coil Data			Price Each
	Max., Pick- up Voltage	V	Ohms	
1 FORM A (SPST-N.O.)				
W117SIP-1	4.0 VDC	5	500	\$5.93
W117SIP-3	9.6 VDC	12	1870	5.93
W117SIP-5	19.2 VDC	24	3200	6.30
W117SIP-6†	4.0 VDC	5	500	6.30
W117SIP-8†	9.6 VDC	12	1870	6.30
W117SIP-10†	19.2 VDC	24	3200	7.84
1 FORM B (SPST-N.C.)				
W117SIP-18	4.0 VDC	5	500	\$9.68
W117SIP-22	4.0 VDC	5%	500	7.97
W117SIP-23	9.6 VDC	12	1200	7.97
W117SIP-24	19.2 VDC	24	2200	7.97
W117SIP-18†	4.0 VDC	5%	500	9.68
W117SIP-25†	9.6 VDC	12	1200	9.68
W117SIP-26†	19.2 VDC	24	2200	9.68

† With internal clamping diode. Diode prevents backflow of high voltage transients.

DIP RELAYS



Contacts rated 10VA max. resistive load: 100 VDC max. switching volts: 0.5A switching current, 1.5A carry current. **Operate Time:** 330 μ sec. **Dielectric Strength:** 200VDC across open contacts. **Contact Resistance:** 200 milliohms.

Mfr. Number	Max. Pick-up Volts	Nom. Volts	Ohms	Typ. Power Req'd.	Price Each
CLASS 107DIP, SPST-N.O., 1 FORM A					
W107DIP-1	3.8 VDC	5 VDC	500	50 mW	\$5.11
W107DIP-3	9.0 VDC	12 VDC	1200	120 mW	5.11
W107DIP-4	18.0 VDC	24 VDC	2200	270 mW	5.55
W107DIP-5†	3.8 VDC	5 VDC	500	50 mW	5.55
W107DIP-7†	9.0 VDC	12 VDC	1200	120 mW	5.55
W107DIP-8†	18.0 VDC	24 VDC	2200	270 mW	6.24
CLASS 171DIP, SPST-N.O., 1 FORM A					
W171DIP-2	3.8 VDC	5 VDC	500	50 mW	\$5.05
W171DIP-4	9.0 VDC	12 VDC	1200	120 mW	5.05
W171DIP-5	18.0 VDC	24 VDC	2200	270 mW	5.55
W171DIP-7†	3.8 VDC	5 VDC	500	50 mW	5.55
W171DIP-9†	9.0 VDC	12 VDC	1200	120 mW	5.55
W171DIP-10†	18.0 VDC	24 VDC	2200	270 mW	7.09

† With internal clamping diode.

DIP RELAYS (CONT'D.)

Mfr. No.	Max. Pick-up Volts	Nom. Volts	Ohms	Typ. Power Req'd.	Price Each
CLASS 171DIP, DPST-N.O., 2 FORM A					
W171DIP-21	3.8 VDC	5 VDC	200	120 mW	\$ 6.89
W171DIP-23	9.0 VDC	12 VDC	500	300 mW	6.89
W171DIP-24	18.0 VDC	24 VDC	2200	270 mW	7.33
W171DIP-25†	3.8 VDC	5 VDC	200	120 mW	7.33
W171DIP-27†	9.0 VDC	12 VDC	500	300 mW	7.33
W171DIP-28†	18.0 VDC	24 VDC	2200	270 mW	9.14

CLASS 171DIP, SPST-N.C., 1 FORM B

W171DIP-12	3.8 VDC	5 VDC	500	50 mW	\$ 7.26
W171DIP-14	9.0 VDC	12 VDC	1200	120 mW	7.81
W171DIP-15	18.0 VDC	24 VDC	2200	270 mW	7.94
W171DIP-17†	3.8 VDC	5 VDC	500	50 mW	7.94
W171DIP-19†	9.0 VDC	12 VDC	1200	120 mW	8.94
W171DIP-20†	18.0 VDC	24 VDC	2200	270 mW	9.76

CLASS 172DIP, SPDT, 1 FORM C

W172DIP-1	3.8 VDC	5 VDC	200	125 mW	\$ 9.82
W172DIP-251	3.8 VDC	5 VDC	500	50 mW	25.32
W172DIP-3	9.0 VDC	12 VDC	500	300 mW	11.28
W172DIP-4	18.0 VDC	24 VDC	2200	270 mW	11.28
W172DIP-5†	3.8 VDC	5 VDC	200	125 mW	10.20
W172DIP-7†	9.0 VDC	12 VDC	500	300 mW	11.28
W172DIP-8†	18.0 VDC	24 VDC	2200	270 mW	12.06
W172DIP-141	3.8 VDC	5 VDC	200	125 mW	9.14
W172DIP-146	18.0 VDC	24 VDC	3200	180 mW	9.14
W172DIP-147†	3.8 VDC	5 VDC	200	125 mW	9.61
W172DIP-149†	9.0 VDC	12 VDC	1000	144 mW	9.61
W172DIP-150†	18.0 VDC	24 VDC	3200	180 mW	9.61
W172DIP-31	3.8 VDC	5 VDC	200	135 mW	11.28
W172DIP-33	9.0 VDC	12 VDC	500	300 mW	11.28
W172DIP-34	18.0 VDC	24 VDC	2200	270 mW	11.28
W172DIP-35†	3.8 VDC	5 VDC	200	135 mW	11.70
W172DIP-37†	9.0 VDC	12 VDC	500	300 mW	11.70
W172DIP-38†	18.0 VDC	24 VDC	2200	270 mW	11.70

CLASS 172DIP, DPDT, 2 FORM C

W172DIP-17	3.8 VDC	5 VDC	46	540 mW	\$34.25
W172DIP-19	9.0 VDC	12 VDC	266	540 mW	34.25
W172DIP-20	18.0 VDC	24 VDC	1066	540 mW	34.25
W172DIP-21†	3.8 VDC	5 VDC	46	540 mW	38.28
W172DIP-23†	9.0 VDC	12 VDC	266	540 mW	38.28
W172DIP-24†	18.0 VDC	24 VDC	1066	540 mW	38.28

CLASS 174DIP, SPST-N.O., 1 FORM A MERCURY WETTED CONTACTS

Contacts rated 50VA max. resistive load: 130VAC 500FDC max. switching volts; 2A max. switching current; 3A carry current.

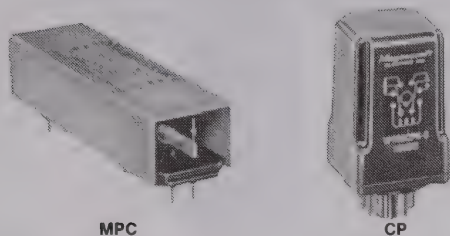
Mfr. No.	Max. Pick-up Volts	Nom. Volts	Ohms	Typ. Power Req'd.	Price Each
W174DIP-1	3.8 VDC	5 VDC	55	500 mW	\$15.49
W174DIP-3	9.0 VDC	12 VDC	300	600 mW	15.49
W174DIP-5†	3.8 VDC	5 VDC	55	500 mW	16.19
W174DIP-7†	9.0 VDC	12 VDC	300	600 mW	16.19
W174DIP-8†	18.0 VDC	24 VDC	1100	600 mW	16.97

† With internal clamping diode.

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REED RELAYS

STANDARD REED RELAYS



Class 102MPCX. Contacts rated SPST-NO, 15VA, 250VDC, 1 Amp max. switching current.

Mfr. Number	Coil			Price Each
	Contacts	Volts	Ohms	
W102MPCX-7	SPST-NO	12 DC	250	\$23.82
W102MPCX-8	SPST-NO	24 DC	1000	23.82

Class 102RMPCX. Power reed relay. Contacts rated SPST-NO. 100VA, 250VDC, 3 Amp max. switching current.

W102RMPCX-2	SPST-NO	12 DC	250	\$26.48
W102RMPCX-3	SPST-NO	24 DC	1000	26.48

Class 103MPCX. Contacts rated SPDT, 10VA, 250VDC, 0.5 Amp. max. switching current.

W103MPCX-3	SPDT	12 DC	250	\$25.02
W103MPCX-4	SPDT	24 DC	1000	25.02
W103MPCX-5	SPDT	48 DC	4000	26.99

Class 103MPCX. Contacts rated DPDT, 10VA, 250VDC, 0.5 Amp max. switching current.

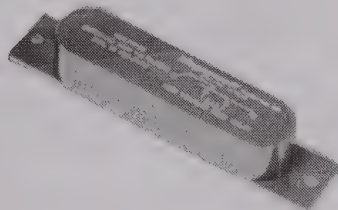
W103MPCX-31	DPDT	12 DC	175	\$33.79
W103MPCX-32	DPDT	24 DC	750	33.79

Class 103CPX. Contacts rated DPDT and 3PDT, 10VA, 250VDC, 0.5 Amp. max. switching current.

W103CPX-8	DPDT	12 DC	300	\$51.75
W103CPX-9	DPDT	24 DC	1000	51.75
W103CPX-13	3PDT	24 DC	650	67.04

*Milliamperes.

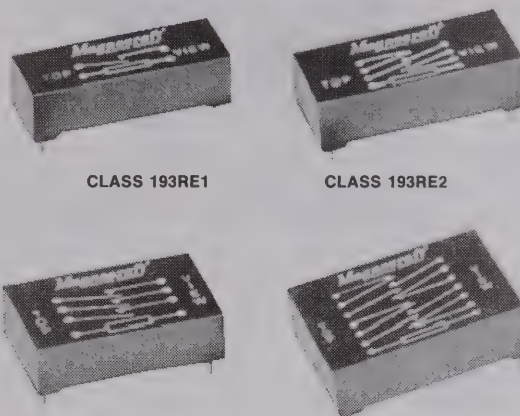
CLASS 102 HIGH VOLTAGE REED RELAYS



Class 102V available in SPST-NO or SPST-NC contact arrangement with 5,000V rating. Class 102 HV available in SPST-NO contact arrangement with 10,000V rating. **Contact Rating:** 50VA max. **Switching Volts:** 102V 5,000 VDC, 102 HV 10,000VDC. **Switching Current:** 102V, 3 amps; 102 HV 0.001 amp. **Initial Contact Resistance:** 150 milliohms. **Dielectric Standoff:** 102V, 6,000VDC across open contacts or between mutually insulated points, 102 HV, 2,000VDC across open contacts or between mutually insulated points. **Operate Time:** 102V 3 milliseconds; 102 HV, 20 milliseconds.

Mfr. No.	Coil			Price Each
	Nom. Power	Volts	Ohms	
5000 V—NORMALLY OPEN				
W102VX-49	500 mW	6 VDC	70	\$65.42
W102VX-50	580 mW	12 VDC	250	65.42
W102VX-51	580 mW	24 VDC	1000	65.42
10,000 V—NORMALLY OPEN				
W102HVX-3	1.5 W	24 VDC	400	75.39

CLASS 193 REED RELAYS



CLASS 193RE1

CLASS 193RE2

CLASS 193RE3

CLASS 193RE4

Low level to 5 amps, 1 to 4 poles. Choice of switching styles in four case sizes. Standard .1" PC grid spacing. TTL compatible for single pole. Other models available from factory (including up to 4 poles and encapsulated versions), or magnetic shielding for enclosed units. Form A contacts rated 10VA max. resistive load; 200VAC max. switching volts; 0.5 max. switching current; 2A max. carry current. Form C contacts rated 8VA max. resistive load; 100VDC max. switching volts; 0.5A max. switching current; 1A max. carry current. **Contact Resistance:** 200 milliohms initial. **Dielectric Withstanding Voltage:** 200VAC min. across open contacts; 500VAC min. between mutually insulated points. **Operate Time (Typ.):** 500 µsec. max. for N.O.; 400 µsec. max. for N.C. **Release Time (Typ.):** 400 µsec. max. for N.O.; 50 µsec. max. for N.C.

Mfr. No.	Contacts	Coil		Price Each
		Ohms	Volts	
SINGLE POLE				
W193RE1A3-5S	1 Form A	500	5 DC	\$13.20
W193RE1A3-12G	1 Form A	420	12 DC	13.20
W193RE1A3-24G	1 Form A	2300	24 DC	13.20
W193RE1C3-5S	1 Form C	350	5 DC	18.30
W193RE1C3-12G	1 Form C	420	12 DC	18.30
W193RE1C3-24G	1 Form C	2300	24 DC	18.30
DOUBLE POLE				
W193RE2A3-6G	2 Form A	70	6 DC	\$12.79
W193RE2A3-12G	2 Form A	280	12 DC	12.79
W193RE2A3-24G	2 Form A	1500	24 DC	12.79
W193RE2C3-6G	2 Form C	70	6 DC	24.44
W193RE2C3-12G	2 Form C	280	12 DC	24.44
W193RE2C3-24G	2 Form C	1500	24 DC	24.44
3 POLE				
W193RE3A3-6G	3 Form A	50	6 DC	\$16.29
W193RE3A3-12G	3 Form A	210	12 DC	16.29
W193RE3A3-24G	3 Form A	1150	24 DC	16.29
W193RE3C3-6G	3 Form C	50	6 DC	34.10
W193RE3C3-12G	3 Form C	210	12 DC	34.10
W193RE3C3-24G	3 Form C	1150	24 DC	34.10
4 POLE				
W193RE4A3-6G	4 Form A	50	6 DC	\$19.16
W193RE4A3-12G	4 Form A	210	12 DC	19.16
W193RE4A3-24G	4 Form A	1150	24 DC	19.16
W193RE4C3-6G	4 Form C	35	6 DC	44.70
W193RE4C3-12G	4 Form C	140	12 DC	44.70
W193RE4C3-24G	4 Form C	770	24 DC	44.70

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TIME DELAY RELAYS



211CP



214CP

CLASS 214CP COMPACT, PLUG-IN SOLID STATE (HYBRID) TIME DELAY RELAY

Fully adjustable time delay offers $\pm 2\%$ repeatability in a size equivalent to general purpose types. Time delay on operate. Contacts DPDT rated 6 amps at 28VDC or 120 resistive. Enclosed in molded dust cover with 8-pin octal plug. **Size:** $2\frac{1}{8}'' \times 1\frac{1}{8}'' \times 1\frac{1}{8}''$. **Weight:** 3 ozs.

Mfr. Number	Timing Secs	Price Each
W214ACPSOX-1	0.3-30	\$63.34
W214ACPSOX-2	3-240	63.34

CLASS 211CP SOLID STATE PLUG-IN TIME DELAY RELAYS

Combines solid state circuitry for timing function, with Class 78 electro-mechanical relay for DPDT 10-amp output switching. Nylon dust cover, plug-in mounting. DC models are reversed polarity protected. Transient protection for 5000V nominal input voltage, for a period not to exceed 50 μ sec. **Contacts:** DPDT, rated 10 amps. **Temperature Range:** Operate, -10° to -55° C storage, -55° to -85° C. **Timing Repeatability:** $\pm 0.1\%$ of setting at nominal voltage at 25° C. **Size:** $1\frac{1}{4}'' \times 2\frac{1}{4}'' \times 2\frac{1}{4}''$ H. (not including knob). **Plug:** Operate types, 8-pin; release types, 11-pin.

Mfr. No.	Coil Voltage*	Delay Secs.	Price Each
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CLASS 211CP DELAY ON OPERATE

W211ACPSOX-18	120 VAC	.1-1	\$62.19
W211ACPSOX-5	120 VAC	.1-10	62.19
W211ACPSOX-7	120 VAC	1-180	62.19
W211ACPSOX-8	120 VAC	2-300	62.19
W211CPSOX-1	24 VDC	.1-10	62.19
W211CPSOX-3	24 VDC	1-180	62.19

CLASS 211CP DELAY ON RELEASE

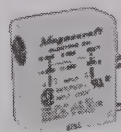
W211ACPSRX-5	120 VAC	.1-10	\$68.81
W211ACPSRX-7	120 VAC	1-180	68.81
W211ACPSRX-8	120 VAC	2-300	68.81
W211CPSRX-1	24 VDC	.1-10	68.81
W211CPSRX-3	24 VDC	1-180	68.81

CLASS 211CP DELAY MINS.

W211ACPSOX-60	120 VAC	1-15	\$62.74
W211ACPSOX-61	120 VAC	2-30	62.74
W211ACPSOX-62	120 VAC	4-60	62.74
W211ACPSOX-63	120 VAC	8-120	62.74
W211ACPSRX-60	120 VAC	1-15	70.75

*COIL DATA: Voltage shown is nominal. Pull-in at 80% of nominal or less for DC relays; 85% of nominal for AC relays at 25° C. Resistance shown is $\pm 10\%$ at 25° C.

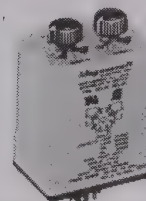
CLASS 67CP MINIATURE SOLID STATE TIME DELAY



Makes use of hybrid circuitry, combining a solid state for the timing function with a miniature industrial relay DPDT 5 ampere output switching. **Contacts:** DPDT as standard. 5 amps, 28VDC or 120VAC resistive load. DC operation of 12 or 24VDC as standard (other voltages available on special order $\pm 2\%$). **Repeatability:** Temperature range -10 to 55° C. UL File No. E43641, CSA File No. LR41729.

Mfr. Number	Input VDC	Timing Range (Slow Operate)	Price Each
W67CPSOX-1	12	.1-30 sec	\$67.99
W67CPSOX-2	24	.1-30 sec	67.99

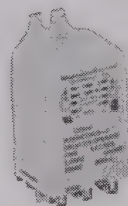
CLASS 222 PLUG-IN SOLID STATE TIME DELAY RELAYS



Operating Modes Available: Repeat cycle only. **Repeat Accuracy:** $\pm 0.1\%$, ± 33 rms on AC or ± 10 rms on DC. **Reset Time:** 100 ms max. **Contacts:** DPDT rated 10 amps. **Input Voltage:** 120VAC standard; others available. Transient Protection 5000 Volts for 50 μ s. **Plug:** 8-pin-octal. UL File No. E43641, CSA File No. LR41729.

Mfr. Number	Timing Ranges		Price Each
	On	Off	
W222ACPFIX-11	.1-10 sec	.1-10 sec	\$89.89
W222ACPFIX-16	3-300 sec	3-300 sec	89.89
W222ACPFIX-27	2-30 min.	2-30 min.	89.89

CLASS 388 LOW-COST SOLID STATE HYBRID, TIME DELAY RELAYS



Flange Mount



Plug-In

Plug-in or flange-mount, fixed or adjustable delay models. Immune to false operation. Repeatability, $\pm 3\%$ for fixed delay, $\pm 0.1\%$ for adjustable delay, 25° C, 120VAC; $\pm 10\%$ over voltage and temperature extremes. **Contacts:** 12 amp DPDT at 28VDC or 115VAC, res. Input voltage for Model Nos. beginning W388AC, 120VAC; 24VDC for those beginning W388C. Steady state current, 20mA at 120VAC, 75mA at 24VDC. Transient and polarity protection to twice input voltage for 8 ms. Reset and recycle time, less than 100 ms. Tough, crackproof dust cover. **Size:** Flange-Mount, $1\frac{1}{2}''$ W $\times$ $1\frac{1}{2}''$ D $\times$ $2\frac{1}{2}''$ H; Plug-in Fixed Delay, $1\frac{1}{2}''$ W $\times$ $1\frac{1}{2}''$ D $\times$ $1\frac{1}{2}''$ H; Plug-in Adjustable Delay, $1\frac{1}{2}''$ W $\times$ $1\frac{1}{2}''$ D $\times$ $2\frac{1}{2}''$ H, overall.

Mfr. Number	Timing Range, Secs	External Resistor Ohms	Price Each
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KNOB ADJUSTABLE DELAY ON OPERATE

W388ACPSOX-42	1-10		\$68.38
W388ACPSOX-44	1-180		68.38

ADJUSTABLE DELAY ON RELEASE

W388CPSRX-2	1-10	.....	\$67.31
W388CPSRX-4	1-180	.....	67.31

DELAY ON OPERATE PLUG-IN MODELS (EXTERNAL RESISTOR ADJUSTABLE)

W388ACPSOX-1	1-10	20K per sec	\$62.32
W388ACPSOX-2	1-120	20K per sec	62.32
W388CPSOX-1	1-10	16K per sec	59.78
W388CPSOX-2	1-120	16K per sec	59.78

DELAY ON OPERATE FLANGE-MOUNT MODELS (EXTERNAL RESISTOR ADJUSTABLE)

W388ACQSOX-1	1-10	20K per sec	\$63.39
W388ACQSOX-2	1-120	20K per sec	63.39
W388CQSOX-2	1-120	16K per sec	60.83

DELAY ON RELEASE PLUG-IN MODELS (EXTERNAL RESISTOR ADJUSTABLE)

W388CPSRX-22	1-120	16K per sec	\$67.31
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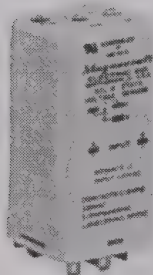
CLASS 235 CURRENT SENSING RELAYS



The current sensing relays combine a solid state sensor with a 1 Form C, 10A relay. They are a field adjustable sensor for detecting AC current levels in equipment. The sensor is non-latching and has no time delay. **Nominal Input Voltage:** 120VAC, 50/60 Hz; other AC and DC voltages available on request. **Current Sensing Range:** 1.5 to 15 amps AC. **Current Sensor Resistance:** 5 milliohms. **Terminals:** Choice of 1/4" or plug-in, 3/16". **Weight:** 4 ozs. UL recognized. CSA pending.

Mfr. No.	Terminals	Price Each
W235ACX-2	1/4"	\$66.01
W235ACX-3	3/16"	68.85

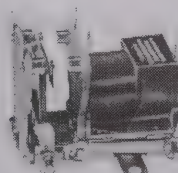
CLASS 236 VOLTAGE SENSING RELAYS



The voltage sensing relays combine CMOS circuitry with a 1 Form C, 13-amp relay. They are field adjustable for pull-in and drop-out and can be used as either an under-voltage or over-voltage relay. **Pull-in Voltage Range:** 75% to 115% of nominal input voltage. **Drop-out Voltage Range:** 75% to 95% of pull-in voltage. **Terminals:** .187" quick-connect. **Mounting:** Printed circuit. **Weight:** 4 ozs. **Size:** 2 3/32" H x 1 7/32" W x 1 1/32" D. UL recognized. CSA pending.

Mfr. Number	Nominal Input Volts	Price Each
Rectangular Plug-In		
W236ACX-1	120 VAC	\$68.77
W236ACX-2	208-240 VAC	73.57
W236ACX-4	480 VAC	78.64
Octal Plug-In		
W236ACPX-1	120 VAC	\$87.29
W236ACPX-4	24 VAC	81.50
W236CPX-1	24 VDC	78.60

CLASS 158 HIGH VOLTAGE RELAYS



Class 158 relays available in SPDT-DB-DM contact arrangement, and capable of switching up to 5000VDC at 200 mA; 1000V at 1A. **Initial Contact Resistance:** 100 milliohms. **Dielectric Standoff:** 75,000V rms across open contacts and contact to ground; 3000VAC coil to ground; 8500V rms contact to coil. **Operate Time:** 45 milliseconds. **Release Time:** 20 milliseconds.

Mfr. No.	200 mA Contacts	Coil		Price Each
		Volts	Ohms	
W158HVX-1	SPDT-DB-DM	24 VDC	120	\$127.73

CLASS 46H HERMETICALLY SEALED SUBMINIATURE RELAYS TO MIL-R-5757 ULTRAHIGH "G" RATING



Available in both solder and plug-in terminals. Both have flanges for chassis mount; socket for plug-in version is available. Contacts are 4PDT rated 7.5 amps resistive or 5 amps inductive at 30VDC or 115VAC. **Temperature Rating:** -65°C to +125°C. **Coil Power:** 4.7 watts. **Operate Time:** 15 msec. **Release Time:** 5 msec.

Mfr. Number	Terminals	Coil VDC	Coil Ohms	Price Each
W46HPX-18	Plug-in	26.5	150	\$304.07
W46HSX-10	Solder	26.5	150	330.30

CLASS 22HS HERMETICALLY SEALED 5-AMP AC-DC RELAY



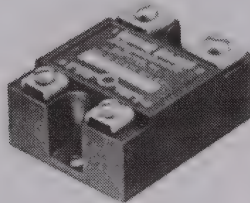
Class 22 relay in 40-158 hermetically-sealed enclosure with 14-pin, glass insulated solder terminal header. Silver alloy contacts rated 5 amps. Three 6-32 threaded mtg. studs on 1 5/16" x 1 1/16" centers. **Size:** 1 7/16" x 1 1/8" x 2 1/16" H. **Weight:** 7 oz.

Mfr. Number	Con-tacts	Voltage Specified	Resis., Ohms	Nom. Power	Price Each
W22AHSX-32	4PDT	115 VAC	500	5 VA	\$362.72

THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS
WE HAVE AVAILABLE. PLEASE
CONTACT US FOR ADDITIONAL PRODUCT INFORMATION.

SOLID STATE RELAYS

CLASS 6 SOLID STATE RELAYS



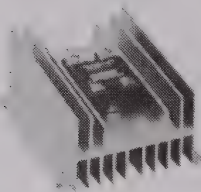
Class 6

Solid state AC relays feature back-to-back SCR's or triacs, internal snubbing network, zero-voltage switching and photo isolation. **Operating Temperature Range:** -30°C to +80°C. **Storage Temperature Range:** -40°C to +100°C. **Weight:** 4 ozs. max. 2.24" Lg. x 1.75" W x 1.00" H. UL recognized (File E62636) and CSA certified (File LR32053).

Mr. Number	AC Line Volts	V _{DSM} Volts	Volts Input	Output Amps	Price Each
W6212DDX-1	0-200	.....	3.5-32	12	\$74.93
W6102DSX-1	20-140	300	3-32	2.5	25.46
W6110DSX-1	20-140	300	3-32	10	32.25
W6125DSX-1	20-140	300	3-32	25	37.85
W6140DSX-1	20-140	300	3-32	40	37.72
W6202DSX-1	40-280	500	3-32	2.5	22.46
W6210DSX-1	40-280	500	3-32	10	32.92
W6225DSX-1	40-280	500	3-32	25	36.43
W6240DSX-1	40-280	500	3-32	40	41.85
W6275DSX-1	40-280	500	3-32	75	77.68
W6110DTX-1*	20-140	300	3-32	10	26.30
W6210DTX-1*	40-280	500	3-32	10	32.92
W6110ASX-1	20-140	300	#	10	37.47
W6125ASX-1	20-140	300	#	25	37.00
W6140ASX-1	20-140	300	#	40	40.51
W6202ASX-1	40-280	500	#	2.5	24.52
W6210ASX-1	40-280	500	#	10	38.38
W6225ASX-1	40-280	500	#	25	38.89
W6240ASX-1	40-280	500	#	40	41.85

*Triac output; all others SCR. #90-280 VAC or 80-140VDC.

HEAT SINKS FOR CLASS 6 SOLID STATE RELAYS



Current ratings for aluminum alloy heat sinks are based on the use of a suitable thermally conductive compound (i.e., silicon grease) between the relay mounting surface and the mounting surface of the heat sink.

Mr. Number	Current Rating	Price Each
16-790	5 to 20 Amps	\$28.59
16-793	Above 20 Amps	66.28

CLASS 301 OPTO ISOLATORS

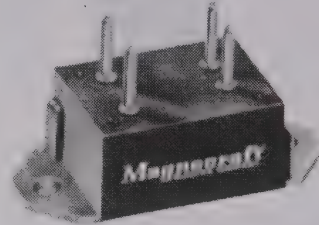


Optical coupling provides high input-output isolation. Can be used as an On/Off switch or as a voltage-controlled resistor. Ideal for triggering SCRs and triacs. Up to 4 watts output. Single pole. AC or DC inputs and outputs. **Output Voltage:** ±250V (DC + AC peak), except 301T-2A2 which is ±100V (DC + AC peak). **Dielectric Strength:** 1000V rms between all insulated points. **Insulation Resistance:** 10⁹ ohms. **Operating Temperature Range:** -40°C to +60°C ambient. **Size:** .438" W x .313" H x 1.212" L. **Weight:** .04 oz.

Mr. No.	Input			Output		Price Each
	Lamp Type	Voltage (V)	Current (mA)	On Resistance (Ohms max.)	Power Dissipation per pole (mW)	
W301T1-2A1	LED	1.7 V	40	2000	200	\$ 9.98
W301T1-2B1	LED	2 DC	25	1000	200	11.25
W301T1-12B1	Incand.	12 DC or AC	24	400	200	9.66
W301T1-120A1	Neon	120 DC or AC*	1.3	1200	200	10.31

*Add 47K ohms external series resistor to limit current.

CLASS 226 SOLID STATE RELAYS

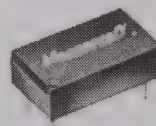


Class 226

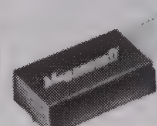
Compatible with TTL gates. SPST-NO contacts rated up to 7A. Relays mount on TO-3 transistor heat sinks for added current rating. **Response Time:** 16 msec. max. **Dielectric Strength:** 2500VAC (input-output isolation). **Operating Temperature Range:** -40°C to +65°C. **Overall Size:** .67" W x 1.5" L. **Height Above PC Board:** .465". **Weight:** 0.37 ozs. UL recognized. File #52197. CSA certified. File LR41729.

Mr. No.	AC Line Volts	V _{DSM} Volts	Input Volts	Output Amps	Price Each
PUSH-ON TERMINALS					
W226R-7-5A1	20-260	400	5 VDC	7	\$19.77
W226R-8-5A1	40-380	700	5 VDC	7	24.65
W226R-7-12A1	20-260	400	12 VDC	7	19.77
W226R-8-12A1	40-380	700	12 VDC	7	24.65
PRINTED CIRCUIT TERMINALS					
W226RE-7-5A1	20-260	400	5 VDC	7	\$19.77
W226RE-8-5A1	40-380	700	5 VDC	7	24.65
W226RE-7-12A1	20-360	400	12 VDC	7	19.77
W226RE-8-12A1	40-380	700	12 VDC	7	24.65

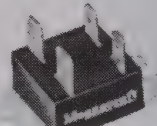
CLASS 230/231 SOLID STATE RELAYS



Class 230E



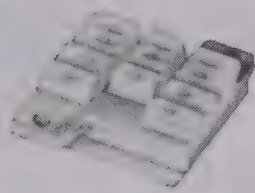
Class 230T



Class 231D

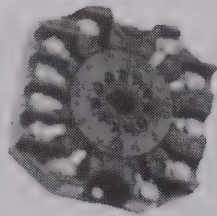
Twin power SCR output for extended operating temperature range. Dual LED control circuit for added reliability and integral reverse polarity protection. SPST-NO contacts, rated up to 4A. Zero crossing. **Dielectric Strength:** 2500VAC (input-output isolation). **Operating Temperature Range:** -30°C to +80°C. **Size (including Mtg. Flanges):** .860" W x 1/4" L. **Height Above PC Board:** .895". **Weight:** 230E, 0.12 oz., 230T, 0.20 oz., 231D, 0.57 oz. UL recognized. File E51297. CSA certified. File LR41279.

Mr. No.	AC Line Volts	V _{DSM} Volts	Input Volts	Output Amps	Price Each
PRINTED CIRCUIT					
W230E-1-5	20-140	400	5 VDC	1.5	\$30.56
W230E-2-5	40-280	500	5 VDC	1.5	33.71
W230E-1-12	20-140	400	12 VDC	1.5	30.56
W230E-2-12	40-280	500	12 VDC	1.5	33.71
PRINTED CIRCUIT WITH HEAT SINK					
W230T-3-5	20-140	400	5 VDC	3	\$33.71
W230T-4-5	40-280	500	5 VDC	3	36.74
W230T-3-12	20-140	500	12 VDC	3	33.71
W230T-4-12	40-280	500	12 VDC	3	36.74
FLANGE MOUNT					
W231D-3-5	20-140	400	5 VDC	4	\$33.71
W231D-4-5	40-280	500	5 VDC	4	36.74
W231D-3-12	20-140	400	12 VDC	4	33.71
W231D-4-12	40-280	500	12 VDC	4	36.74



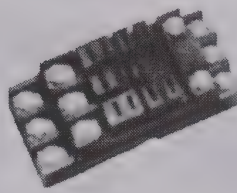
70-124-1, 70-124-2
70-178-1&-2

For Class 388 nylon solder.
quick-connect or printed
circuit. Without mounting
ears



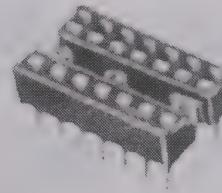
70-169-1, 70-170-1

For Classes 88, 211, & 250
screw terminal 8 & 11 pin octal



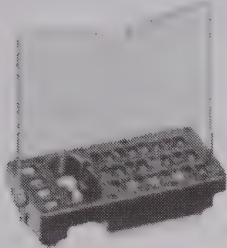
70-233-1

For Class 388 screw terminal
11 pin



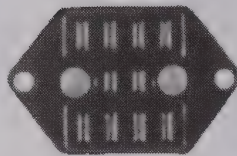
70-276

For DIP 14 pin



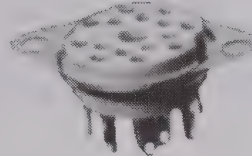
70-303, 70-304, 70-305, 70-306
70-307, 70-308, 70-309, 70-310

For Class 67, solder & printed
circuit terminals SPDT, DPDP,
4PDT, 6PDT, & 8PDT



70-312

For Class 97 solder terminals



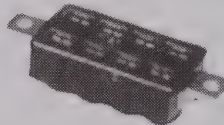
70-320

For Class 46
Solder Terminals



70-378-1, 70-379-1, 70-399-1,
70-400-1, 70-401, 70-402

For Class 78, solder, printed
circuit and screw terminals
SPDT, DPDT, 4PDT



70-446

For Class 21, 8 contact socket
with ground terminal



70-449

For Class 76 Screw Terminals

SOCKETS

Mfr. No.	No. of Pins	Socket Relay Class	Amp Rating	No. of Relay Poles	Approval		Type of Terminals	Mounting	Hold-down Clip Included	Price Each	Hold-Down Clip Part No.
					UL	CSA					
70-124-1	11	235, 236, 388	15	1, 2, 3	Yes	Yes	Solder	Chassis	No	\$ 3.02	16-722-2*
70-124-2	11	235, 236, 388	15	1, 2, 3	Yes	Yes	PC	Chassis	No	3.02	15-722-2*
70-178-1	11	235, 236, 388	15	1, 2, 3	Yes	Yes	PC	PC	No	3.14	16-722-2*
70-178-2	11	388#	15	1, 2, 3	Yes	Yes	PC	PC	No	3.14	16-722-2*
70-169-1	8	88, 103CP.	10	1, 2	Yes	Yes	Screw	Surface	No	9.28	None
70-170-1	11	211, 250	10	3	Yes	Yes	Screw	Surface	No	16.30	None
70-233-1	11	235, 236, 388	15	1, 2, 3	Yes	Yes	Screw	Surface	No	19.67	None
70-276	14	DIP	.....	1, 2	.....	.....	PC	PC	No	22.45**	None
70-303	10	67	5	1, 2	.....	.....	Solder	Chassis	Yes	5.14	16-875-1
70-304	10	67	5	1, 2	.....	.....	PC	PC	Yes	5.14	16-875-1
70-305	16	67	5	4	.....	.....	Solder	Chassis	Yes	7.05	16-875-2
70-306	16	67	5	4	.....	.....	PC	PC	Yes	7.05	16-875-2
70-307	22	67	5	6	.....	.....	Solder	Chassis	Yes	10.03	16-875-3
70-308	22	67	5	6	.....	.....	PC	PC	Yes	10.03	16-875-3
70-309	28	67	5	8	.....	.....	Solder	Chassis	Yes	14.80	16-1120-8
70-310	28	67	5	8	.....	.....	PC	PC	Yes	14.80	16-1120-8
70-312	10	97	25	2	Yes	No	Solder	Chassis	No	14.95	None
70-320	14	46	.....	4	.....	.....	Solder	Chassis	No	30.28	None
70-378-1	14	78	5	4	Yes	Yes	Solder	Chassis	Yes	2.02	16-1197
70-379-1	14	78	5	4	Yes	Yes	PC	PC	Yes	2.02	16-1229
70-461	14	78	5	4	Yes	Yes	Screw	Chassis	Yes	16.73	16-1229
70-459	8	78R	15	2	Yes	Yes	Screw	Chassis	Yes	12.36	16-1197
70-401	8	78R	15	2	Yes	Yes	Solder	Chassis	Yes	3.21	16-1197
70-402	8	78R	15	2	Yes	Yes	PC	PC	Yes	3.06	16-1197
70-446	8	21	20	2	Yes	.....	Solder	Chassis	No	15.78	None
70-449	5	76	16	1	.....	.....	Screw	Surface	Yes	10.72	.....

*Hold-down clip must be ordered separately. # Without mounting ears: for Class 388 nylon. Solder, quick-connect or PC terminals. **Box of 10.

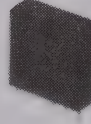


MSD, Inc.

MANUFACTURERS OF STRUTHERS-DUNN™
COMMERCIAL / INDUSTRIAL RELAY PRODUCTS

RELAY SELECTOR GUIDE

PRINTED CIRCUIT TERMINAL—LOW LEVEL TO 30 AMP, 1-4 POLE, SEALED AND UNSEALED

SERIES	276	277			270	272	272L
							
DIMENSIONS (L x W x H)	0.787" x 0.500" x 0.394"	1.142" x 0.512" x 1.024"			0.866" x 0.630" x 0.622"	0.787" x 0.390" x 0.354"	0.787" x 0.390" x 0.354"
FEATURES	• 10 Amp Contact • Miniature Size • Polarized for Coil Sensitivity—40 mA @ 5VDC • 4 mm Coil—Contact Spacing • 5KV Surge Withstand • Immersion Cleanable • PBT Materials	• AC or DC Coil Construction • 8 mm Coil—Contact Spacing • 10KV Surge Capability • Sealed Terminals • PBT Materials • 0.1" Term. Grid			• General Purpose Relay • 3, 5 or 10 Amp Switching • Immersion-Cleanable • TV-5 Rating	• 0.1" Grid DIP Relay • Immersion-Cleanable • 1500V FCC Surge Capability • Meets FCC Part 68 • Crossbar Bifurcated Contacts • Polarized For Coil Sensitivity	• 0.1" Grid DIP Bistable Mag. Latch—2 Coil • Immersion Cleanable • 1500V FCC Surge Capability • Meets FCC Part 68 • Crossbar Bifurcated Contacts
CONTACT DATA							
Form:	1 Form A; 1 Form C	2 Form A; 2 Form C			1 Form A 1 Form C	2 Form C	2 Form C
Material:	Silver Alloy	Silver Alloy			Silver Alloy | Sil. Cad. Oxide	Gold Clad—Silver Nickel	Gold Clad—Silver Nickel
Ratings:							
120/AC	1A | 1C				3A | 5A, 10A	1A	1A
240/AC	10A | 7A	5A			1.5A | 2.5A, 5A	—	—
30/DC	10A | 7A	5A			3A | 5A, 10A	2A	2A
COIL DATA							
AC Volts	—	6, 12, 24, 120			—	—	—
DC Volts	3, 5, 6 9, 12, 24	3, 5, 6, 12, 24, 48, 110			6, 9, 12, 24, 48	3, 5, 6, 9, 12, 24, 48	3, 5, 6, 9, 12, 24
Power:							
AC VA	—	0.9			—	—	—
DC Watts	0.2	0.53			0.36	0.4	0.36
GENERAL DATA							
Ambient Temp.:	−40°C to +70°C	−40°C to +70°C			−30°C to +60°C	−40°C to +70°C	−40°C to +70°C
Operate Time:	10 ms	15 ms			6 ms	3 ms	3 ms
Release Time:	10 ms	10 ms			2 ms	2 ms	2 ms
VDE Spacing:	4 mm	8 mm			—	—	—
Life:							
Rated Load	100,000	100,000			100,000	500,000	100,000
No Load	50 million	10 million			10 million	100 million	100 million
OPTIONS	Dust Cover Version	AC Coil Operation			TV-5 Rated Versions (Form A only) Appl. and Auto types Dust Cover Types	High Sensitivity 0.2W Coil Available	High Sensitivity 0.12W Coil Available
APPROVALS	UL, CSA	UL, CSA			UL, CSA	UL, CSA	UL, CSA

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.



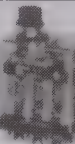
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COMMERCIAL / INDUSTRIAL RELAY PRODUCTS

RELAY SELECTOR GUIDE

3-WAY TERMINAL, 5-15 AMP, 1-3 POLE

3-WAY TERMINAL, 10-AMP, 4 POLE

SERIES	A283	285	286	287	292	284	306	308
								
DIMENSIONS (L x W x H)	1.500" x 1.375" x 2.156"	1.500" x 1.375" x 2.156"	1.500" x 1.375" x 3.281"	1.500" x 1.375" x 3.281"	1.500" x 1.375" x 2.156"	1.500" x 1.938" x 2.156"	1.500" x 1.938" x 2.375"	1.500" x 1.938" x 2.156"
FEATURES	• 3 Way Term. Solder 0.187 Q.C. Plug In • Open Style or Enclosed • Compact • Polycarbonate Cover • 600 VAC Rated	• Perm. Mag. Latch Relay • Single or Dual Coil • 3 Way Term.: Solder 0.187 Q.C. Plug In • High Sensitivity Coils Avail. • AC or DC Input	• Delay-On Timer • 3 Way Term.: Solder 0.187 Q.C. Plug In • Adjustable Timing 0.1 to 300 sec • Inverse Polarity Protection • ±3% Repeatability • 150 ms max. Recycle Time • Transient Protection • No False Contacting • Electronic Module—Epoxy Molded	• Delay-Off Timer • 3 Way Term.: Solder 0.187 Q.C. Plug In • Adjustable Timing 0.1 to 300 sec • Inverse Polarity Protection • Transient Protection • ±3% Repeatability • 150 ms max. Recycle Time • Electronic Module—Epoxy Molded	• Low Power DC Relay • 3 Way Term.: Solder 0.187 Q.C. Plug In • 125 mW/Pole • Operate over Wide Voltage Range • Clear Polycarbonate Cover	• 3 Way Term.: Solder 0.187 Q.C. Plug In • Sockets: Screw Term. Front-Connected PC Term. Solder Term. QC Term. • Polycarbonate Cover • Compact Size	• Delay-On Timer • 3-Way Term.: Solder 0.187 Q.C. Plug In • Adjustable Timing 0.1 to 300 sec • ±3% Repeatability • Inverse Polarity Protected • No False Contacting • Transient Protection • 150 ms max. Recycle Time • Electronic Module—Epoxy Molded	• Perm. Mag. Latch Relay • 3 Way Term.: Solder 0.187 Q.C. Plug In • AC or DC Input • No False Transfer with 5 Times Nom. Voltage Pulse
CONTACT DATA								
Form:	1 Form C to 3 Form C	1 Form C to 3 Form C	1 Form C to 3 Form C	1 Form C to 3 Form C	1 Form C to 3 Form C	4 Form C	4 Form C	4 Form C
Material:	Sil. Cad. Oxide	Sil. Cad. Oxide	Sil. Cad. Oxide	Sil. Cad. Oxide	Silver	Gold Sil. Cad Oxide	Sil. Cad. Oxide	Sil. Cad. Oxide
Ratings:								
120/AC	10A, 1/3 HP	10A, 1/3 HP	10A, 1/3 HP	10A, 1/3 HP	5A	10A, 1/3 HP	10A, 1/3 HP	10A, 1/3 HP
240/AC	10A, 1/2 HP	10A, 1/2 HP	10A, 1/2 HP	10A, 1/2 HP	5A	10A, 1/2 HP	10A, 1/2 HP	10A, 1/2 HP
30/DC	10A, —	10A, —	10A, —	10A, —	5A	10A, —	10A, —	10A, —
COIL DATA								
AC Volts	6 to 240	6 to 120 (240 with series resistor)	24 to 240	24 to 240	—	6 to 240	24 to 240	6 to 120 (240 with series resistor)
DC Volts	6 to 125 (250VDC with series resistor)	6 to 125 (250VDC with series resistor)	12 to 125	12 to 125	15 to 139 (11.1 to 3.5 ma)	6 to 125 (250VDC with series resistor)	12 to 125	6 to 125 (250VDC with series resistor)
Power:								
AC VA	2 (2 Pole) 2.7 (3 Pole)	0.78	2 (2 Pole) 2.7 (3 Pole)	2 (2 Pole) 2.7 (3 Pole)	—	3.4	3.4	1.33W
DC Watts	1.2 (1.5W @ 125V)	1.6 Standard 0.5 Sensitive	1.2 (1.5W @ 125V)	1.2 (1.5W @ 125V)	0.125/Pole	1.2 (1.9W @ 125V)	1.2 (1.9W @ 125V)	1.2 (1.9W @ 125V)
GENERAL DATA								
Ambient Temp.:	−45°C to +70°C	−45°C to +70°C	−10°C to +70°C	−10°C to +70°C	−45°C to +70°C	−45°C to +50°C AC −45°C to +70°C DC	−10°C to +45°C AC −10°C to +70°C DC	−45°C to +70°C
Operate Time:	15 ms	25 ms AC; 15 ms DC	As selected	15 ms	20 ms	15 ms	As selected	25 ms AC; 15 ms DC
Release Time:	10 ms	25 ms AC; 15 ms DC	10 ms	As selected	15 ms	10 ms	10 ms	25 ms AC; 15 ms DC
Life:								
Rated Load	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000
No Load	10 million	10 million	10 million	10 million	10 million	10 million	10 million	10 million
OPTIONS	Indicator Lamp Manual Actuator PC Sockets QC Sockets 15 Amp Contacts 5 Amp Contacts Perm. Mag. Blowout 130°C Coil Gold Diffus. Contacts Tungsten Contacts	Indicator Lamp Manual Actuator PC Sockets QC Sockets 15 Amp Contacts 5 Amp Contacts 130°C Coils Gold Diffus. Contacts	PC Sockets QC Sockets Stud or Bracket Mount 15 Amp Contacts 5 Amp Contacts Gold Diffus. Contacts Fixed Timing Remote Timing	PC Sockets QC Sockets Stud or Bracket Mount 15 Amp Contacts 5 Amp Contacts Gold Diffus. Contacts Fixed Timing Remote Timing	Indicator Lamp (125DC Coil Only) Manual Actuator PC Socket QC Socket Stud or Bracket Mount Gold Diffus. Contacts	Indicator Lamp Manual Actuator Mounting Styles: 6-32 Stud Tapped Hole PC Terminals Gold Diffus. Contacts 5 Amp Contacts	Sockets: Screw Term. Front Connected PC Term. Solder Term. QC Term. Fixed Timing Remote Timing 5 Amp Contacts	Sockets: Screw Term. Front Connected PC Term. Solder Term. QC Term. Dual Coil Construction 5 Amp Contacts
APPROVALS	UL, CSA	UL, CSA	UL, CSA	UL, CSA	UL	UL, CSA	UL	—

**OUR GOAL IS PROVIDING QUALITY PRODUCTS AND SERVICES
TO MEET YOUR NEEDS.**



MSD, Inc.

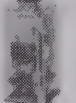
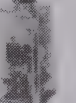
MANUFACTURERS OF STRUTHERS-DUNN™
COMMERCIAL / INDUSTRIAL RELAY PRODUCTS

RELAY SELECTOR GUIDE

2-WAY TERMINAL, 20-AMP, 1-3 POLE

OCTAL STYLE PLUG IN, 5-10 AMP, 1-3 POLE

ICE CUBE STYLE, 1-10 AMP, 2 & 4 POLE

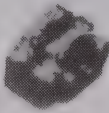
SERIES	298	300	A314	326	327	392	C281	282
								
DIMENSIONS (L x W x H)	1.500" x 1.375" x 2.906"	1.500" x 1.375" x 2.906"	1.375" x 1.375" x 2.813"	1.375" x 1.375" x 4.375"	1.375" x 1.375" x 4.375"	1.375" x 1.375" x 2.813"	1.125" x 0.875" x 1.531"	1.125" x 0.875" x 3.125"
FEATURES	• 2 Way Terminals 0.25 Q.C. Solder • Handles Tough Loads at Low Cost • 277VAC, 20A • 600VAC, 5A • Polycarbonate Cover with Mounting Tabs	• 2 Way Terminals 0.25 Q.C. Solder • Handles Tough Loads at Low Cost • 277VAC, 20A • 600VAC, 5A • Accepts 0.25 Booted Quick Connect • Polycarbonate Cover with Mounting Tabs	• Long Life • Low Cost • Open or Plug-In (8 & 11 pin) • Straight Thru Wiring • Fewer Solder Joints • Greater Reliability	• Delay-On Timer • Adjustable Timing 0.1 to 300 sec • Low Cost • Octal Plug-In • Transient Protection • Polarity Protection • Electronic Module-Epoxy Molded • Repeatability $\pm 3\%$ • No False Contacting	• Delay-Off Timer • Adjustable Timing 0.1 to 300 sec • Octal Plug-In • Transient Protection • Polarity Protection • Electronic Module-Epoxy Molded • Repeatability $\pm 3\%$ • No False Contacting	• Low Power DC Relay 125 mW/Pole • Low Cost • Operate Over Wide Voltage Range • Clear Polycarbonate Cover	• General Purpose Low Cost • 1-Amp Bifurcated Contacts • 3A Silver Contacts • 5A and 10A Silver Cad-Oxide Contacts	• Delay-On Timer • Plug-In Mount • PC Mount • Adjustable Timing 0.1 to 300 sec • Transient Protection • Polarity Protection • Electronic Module-Epoxy Molded • Repeatability $\pm 3\%$ • No False Contacting
CONTACT DATA Form: Material: Ratings: 120/AC 240/AC 30/DC	1 Form C to 3 Form C Sil. Cad. Oxide 20A, 3/4 HP 20A, 1 HP 20A, —	2 Form C Sil. Cad. Oxide 20A, 3/4 HP 20A, 1 HP 20A, —	1 Form C to 3 Form C Sil. Cad. Oxide 10A, 1/2 HP 5A, 1/2 HP 10A, —	1 Form C to 3 Form C Sil. Cad. Oxide 10A, 1/2 HP 5A, 1/2 HP 10A, —	1 Form C to 3 Form C Sil. Cad. Oxide 10A, 1/2 HP 5A, 1/2 HP 10A, —	1 Form C to 3 Form C Silver 5A — 5A	2 Form C 4 Form C SCO SIL/SCO 10 3/5 — — 10 3/5	2 Form C 4 Form C SCO SIL/SCO 10 3/5 — — 10 3/5
COIL DATA AC Volts DC Volts Power: AC VA DC Watts	6 to 240 6 to 125 (250VDC with series resistor) 3.4 1.2 (3 Pole, 2W)	6 to 240 6 to 125 (250VDC with series resistor) 3.4 1.2	6 to 240 6 to 110-125 2.1 1.2 (1.5W @ 125V)	24 to 240 12 to 125 2.1 1.2 (1.5W @ 125V)	24 to 240 12 to 125 2.1 1.2 (1.5W @ 125V)	— 15 to 139 (11.1 to 3.5 ma) — 0.125/Pole	6 to 220 6 to 110 1.2 1.0 (1.1W @ 110V)	12 to 120 12 to 110 1.2 1.0 (1.1W @ 110V)
GENERAL DATA Ambient Temp.: AC DC Operate Time: Release Time: Life: Rated Load No Load	—30°C to +50°C —30°C to +60°C 20 ms 15 ms 100,000 10 million	—30°C to +50°C —30°C to +60°C 20 ms 15 ms 100,000 10 million	—45°C to +55°C —45°C to +70°C 15 ms 10 ms 100,000 10 million	—10°C to +55°C —10°C to +70°C As Selected 10 ms 100,000 10 million	—10°C to +55°C —10°C to +70°C 15 ms As Selected 100,000 10 million	— —45°C to +70°C 20 ms 15 ms 100,000 10 million	—45°C to +70°C —45°C to +70°C 15 ms 10 ms 500,000 50 million	—10°C to +55°C —10°C to +70°C As Selected 10 ms 500,000 50 million
OPTIONS	Indicator Lamp Manual Actuator 5 Amp Contacts Perm. Mag. Blowout Mounting Styles: 6-32 Stud (Core) 6-32 Stud (Top) 6-32 Tapped Core 130°C Coil	Indicator Lamp Manual Actuator 5 Amp Contacts Perm. Mag. Blowout Mounting Styles: 6-32 Stud (Core) 6-32 Stud (Top) 6-32 Tapped Core 130°C Coil	Indicator Lamp Manual Actuator 5 Amp Contacts Perm. Mag. Blowout 130°C Coil Open Styles: 6-32 Stud (Core) 6-32 Tapped Core Gold Diffus. Contacts	Perm. Mag. Blowout 5 Amp Contacts Gold Diffus. Contacts Fixed Timing Remote Timing	Perm. Mag. Blowout 5 Amp Contacts Gold Diffus. Contacts Fixed Timing Remote Timing	Indicator Lamp (125DC Coil Only) Manual Actuator Open Styles: 6-32 Stud (Core) 6-32 Tapped Core	Indicator Lamp Manual Actuator Various Mountings Opp. Pol Barrier Diode Across Coil Sealed (Immersion Cleanable) PC Term. Version	Fixed Timing Remote Timing
APPROVALS	UL	UL	UL, CSA	UL, CSA	UL, CSA	UL	UL, CSA	UL

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**SCREW TERMINAL,
15-30 AMP, 1-3 POLE**

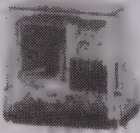
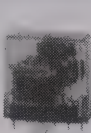
SCREW/Q.C. TERMINAL MOTOR CONTACTORS, 1-7.5 HP, 3-4 POLE

SERIES	425	415	A275	B48	375	475	A548	A575
								
DIMENSIONS (L x W x D)	3.250" x 2.500" x 2.500"	2.750" x 1.875" x 1.750"	2.875" x 3.625" x 2.750"	3.375" x 4.531" x 2.500"	4.650" x 3.250" x 2.620"	2.875" x 3.625" x 2.750"	2.813" x 2.500" x 5.125"	5.250" x 4.437" x 3.000"
FEATURES	• High Current • Low Cost • Long Life • Multi-Contact Arrangement • Motor Loads • High Inrush Loads • Var. Speed Drive Load • 600VAC Rated	• Compact Size • Heavy Duty • Open Style • Screw Terminals • Encapsulated Coils • Panel Mount • High Inrush Contacts	• 2 Coil Reversing Contactor • 1 HP Rated • 0.25" Dual Quick-Connect Terminals • Up to 4 Auxiliary Contacts • Encapsulated Coils—AC or DC • Mechanical Interlock • 600VAC Rated • Operate in Any Position	• Non-Reversing Contactor • Solenoid Operation • Double Make Contacts • Encapsulated Coil • Screw Terminals	• 20 Amp Reversing Contactor with Mechanical Interlock • Auxiliary Contacts • 0.25" Dual Quick-Connect Load Terminals • Panel Mounting • Encapsulated Coils	• 2 Coil Reversing Contactor • 1 HP Rated • Side-Exit Coil Terminals • 0.25" Dual Quick-Connect Terminals • Up to 4 Auxiliary Contacts • Encapsulated Coils AC or DC • Mechanical Interlock • 600VAC Rated • Operate in Any Position	• 3 Pole Non-Reversing Contactor • Screw Terminals • Encapsulated Coil • Contacts Rated to 7.5 HP	• 2 Coil Reversing Contactor • Mechanical Interlock • Screw Terminals • Encapsulated Coils • Auxiliary Contacts
CONTACT DATA								
Form:	Up to 3 Form C	1 Form A to 2 Form C	6P DM (3 Per Coil)	4P DM	8P DM (4 Per Coil)	6P DM (3 Per Coil)	3P DM	6P DM (3 Per Coil)
Material:	Sil. Cad. Oxide	Sil. Cad. Oxide	Sil. Cad. Oxide	Sil. Cad. Oxide	Sil. Cad. Oxide	Sil. Cad. Oxide	Sil. Cad. Oxide	Sil. Cad. Oxide
Ratings:	120VAC 30A* 240VAC 30A* 480VAC 12.5A 600VAC 10A 30VDC 15A — *25A for 3 pole relay	120VAC 15A, ½ HP 240VAC 10A, 1 HP — 30VDC 15A —	120VAC 15A, 1 HP 240VAC 10A, 2 HP 480VAC 5A, 2 HP 600VAC 5A, 2 HP 30VDC 15A 125VDC 5A 250VDC 1A	120VAC 15A, 1 HP 240VAC 15A, 1.5 HP 550VAC 15A, 3 HP 125VDC 15A 250VDC 2A	120VAC 20A, 2 HP 240VAC 15A, 7.5 HP 480VAC 15A, 7.5 HP 600VAC 15A, 7.5 HP —	120VAC 15A, 1 HP 240VAC 10A, 2 HP 480VAC 5A, 2 HP 600VAC 5A, 2 HP 30VDC 15A 125VDC 5A 250VDC 1A	120VAC 30A, 1.5 HP 240VAC 30A, 5 HP 480VAC 15A, 7.5 HP 600VAC 15A, 7.5 HP 125VDC 15A 250VDC 2A	120VAC 30A, 1.5 HP 240VAC 30A, 5 HP 480VAC 15A, 7.5 HP 600VAC 15A, 7.5 HP 125VDC 15A 250VDC 2A
COIL DATA								
AC—Volts	6 to 480	6 to 240	12 to 240	24 to 600	12 to 600	12 to 240	24 to 600	24 to 600
DC—Volts	6 to 220	6 to 125 (Use series resistor for 250DC)	12 to 120	12 to 230	—	12 to 120	12 to 230	12 to 230
Power:	1&2 pole 3 pole							
AC VA	9.8 11	6	16.7	22	10 (52 Inrush)	16.7	22	22
DC Watts	2.0 4	3.5	4.5	10	—	4.5	10	10
GENERAL DATA								
Ambient Temp.:								
AC:	−55°C to +45°C	−45°C to +55°C	−45°C to +50°C	−45°C to +50°C	−45°C to +50°C	−45°C to +50°C	−40°C to +50°C	−40°C to +50°C
DC:	−55°C to +80°C	−45°C to +70°C	−45°C to +70°C	−45°C to +50°C	—	−45°C to +70°C	−40°C to +50°C	−40°C to +50°C
Operate Time:	30 ms	25 ms	50 ms	60 ms	50 ms	50 ms	60 ms	60 ms
Release Time:	15 ms	10 ms	30 ms	30 ms	30 ms	30 ms	30 ms	30 ms
Life:								
Rated Load	100,000	200,000	100,000	100,000	100,000	100,000	100,000	100,000
½ Rated Load	500,000	500,000	500,000	250,000	500,000	500,000	250,000	250,000
No Load	10 million	20 million	5 million	5 million	10 million	10 million	5 million	5 million
Dielectric Strength	2,500VAC	1,750VAC	2,500VAC	2,500VAC	2,500VAC	2,500VAC	2,500VAC	2,500VAC
OPTIONS	Quick-Connect Term. High Inrush Tungsten Contacts Auxiliary Contacts Perm. Mag. Blowout 130°C Coil	High Voltage Contacts (to 15KV) Perm. Mag. Blowout Quick-Connect Term. 500mW Coil (DC only)	Auxiliary Contacts — Up to Four with 0.25" Quick-Connect Term. Rated 5A	One Auxiliary Contact (Snap Switch) Rated 15A	Auxiliary Contacts — Up to 4 Form C Rated 5A at 300VAC Screw Terminals on Main Contacts	Auxiliary Contacts — Up to 4 with 0.25" Quick-Connect Term. Rated 5A	One Auxiliary Contact (Snap Switch) Rated 15A	Auxiliary Contacts — 1 Form A and 1 Form B on each side or 1 Form C on each side Rated 5A
APPROVALS	UL, CSA	UL	UL, CSA	UL	UL, CSA	UL, CSA (Pending)	UL	UL, CSA

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INDUSTRIAL PLUG IN, 5-10 AMP, 2-6 POLE

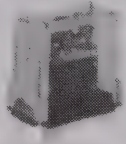
SERIES	219	T219	246	247	B255	A311	349
							
DIMENSIONS (L x W x H)	12 PIN: 2.625" x 1.469" x 3.406" 14 PIN: 3.063" x 1.469" x 3.406"	2.625" x 1.469" x 5.250"	2.625" x 1.469" x 5.250"	2.625" x 1.469" x 5.250"	2.625" x 1.469" x 4.563"	2.625" x 1.469" x 3.406"	2.625" x 1.469" x 4.875"
FEATURES	• 10 Amp Multi-Pole—to 4 Form C or 6 Form A • Industrial Plug-In with Locking Clip • Encapsulated Coil • Polycarbonate Cover • Gold Diff. Sil. Cad. Oxide Contacts • Single Level Socket Wiring	• Time Delay Relay: Delay-On Interval Flasher • Adjustable Timing: 0.1 sec to 36 Hrs. • CMOS Circuitry • AC/DC Input—Not Polarity Sensitive • Repeatability: AC ±0.5%; DC ±0.2% • No False Contacting • Recycle Time: 60 ms • Single Level Socket Wiring	• Delay-On-Operate ISO Timer • Adjustable Timing: 0.1 to 300 sec • Repeatability: ±3% • No False Contacting • Polarity Protection • Recycle Time: 150 ms Max. • Transient Protection • Single Level Socket Wiring	• Delay-On-Release ISO Timer • Adjustable Timing: 0.1 to 300 sec • Repeatability: ±3% • Recycle Time: 150 ms Max. • Transient Protection • Single Level Socket Wiring • No False Contacting	• 2 Coil Mechanical Latch • Single Level Socket Wiring • Continuous Duty Coils • Both Coils May Be Energized Simultaneously—No Damage	• Sequence (Stepping) Relay • Single Coil • Contact Transfer on Energizing/De-energizing Stroke of Relay • Single Level Socket Wiring • Continuous Duty Coil	• Over/Undervoltage Sensing Relay • Single Phase or Three Phase • Fixed or Adjustable Differential • Single Level Socket Wiring
CONTACT DATA							
Form:	2 Form C to 4 Form C or up to 6 Form A-Form B Combinations	2 Form C to 2 Form A & 2 Form C	2 Form C to 2 Form A & 2 Form C	2 Form C; 3 Form C	2 Form C, 3 Form C or Up to Four Form A/B Combinations	2 Form C	2 Form C or 2 Form A & 2 Form C
Material:	Sil. Cad. Oxide—Gold Diffused	Sil. Cad. Oxide—Gold Diffused	Sil. Cad. Oxide—Gold Diffused	Sil. Cad. Oxide—Gold Diffused	Sil. Cad. Oxide—Gold Diffused	Sil. Cad. Oxide	Sil. Cad. Oxide—Gold Diffused
Ratings:							
24/DC or 120/AC	Make 30A, Carry 10A, Break 10A	Make 30A, Carry 10A, Break 10A	Make 30A, Carry 10A, Break 10A	Make 30A, Carry 10A, Break 10A	Make 30A, Carry 10A, Break 10A	5A	Make 30A, Carry 10A, Break 10A
240/AC	Make 30A, Carry 10A, Break 5A	Make 30A, Carry 10A, Break 5A	Make 30A, Carry 10A, Break 5A	Make 30A, Carry 10A, Break 5A	Make 30A, Carry 10A, Break 5A	—	Make 30A, Carry 10A, Break 5A
125/DC	Make 30A, Carry 10A, Break 0.5A	Make 30A, Carry 10A, Break 0.5A	Make 30A, Carry 10A, Break 0.5A	Make 30A, Carry 10A, Break 0.5A	Make 30A, Carry 10A, Break 0.5A	0.1A	Make 30A, Carry 10A, Break 0.5A
COIL DATA							
AC Volts	6 to 240	24 to 120	24 to 240	24 to 240	6 to 240	6 to 240	85 to 135
DC Volts	6 to 125 (250V with series resistor)	24 to 125	24 to 125	24 to 125	6 to 125 (250V with series resistor)	6 to 125 (250V with series resistor)	—
Power:							
AC VA	5	1.8W	5	5	5 OP 3 RESET	5	1.8W
DC Watts	1.8 (2.5W @ 125VDC)	1.8	1.8	1.8	1.8 OP 1.9 RESET	1.8	—
GENERAL DATA							
Ambient Temp.:	−10°C to +60°C	−20°C to +65°C	−10°C to +45°C AC −10°C to +70°C DC	−10°C to +45°C AC −10°C to +70°C DC	−10°C to +60°C	−10°C to +60°C	−10°C to +60°C
Operate Time:	25 ms	As Selected	As Selected	20 ms	25 ms	35 ms	25 ms
Release Time:	20 ms	20 ms	20 ms	As Selected	20 ms	35 ms	25 ms
Life:							
Rated Load	100,000	100,000	100,000	100,000	100,000	100,000	100,000
½ Rated Load	500,000	500,000	500,000	500,000	500,000	500,000	500,000
No Load	10 million	20 million	10 million	10 million	10 million	5 million	20 million
OPTIONS	Indicator Lamp Manual Actuator Bifurcated Contacts Coil Suppression Perm. Mag. Blowout 130°C Coil Nuclear Qualified	Indicator Lamp Manual Actuator Bifurcated Contacts Perm. Mag. Blowout Fixed Timing	Indicator Lamp Manual Actuator Bifurcated Contacts Magnetic Blowout Fixed Timing Remote Adjust.	Indicator Lamp Manual Actuator Bifurcated Contacts Magnetic Blowout Fixed Timing Remote Adjust	Indicator Lamp Manual Actuator Bifurcated Contacts Magnetic Blowout Coil Suppression Time Delay on Reset Coil	Indicator Lamp Coil Suppression Non-Standard Sequences	Indicator Lamp Bifurcated Contacts Magnetic Blowout
APPROVALS	UL, CSA	—	UL, CSA	UL	UL, CSA	UL	—

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INDUSTRIAL PLUG IN, 2-5 AMP, 1-2 POLE

INDUSTRIAL PLUG IN LOGIC MODULES, 0.5-10 AMP, 1-2 POLE

SERIES	112-PGF	RSX1800	101-105	106	107-108	109-110	111-112
							
DIMENSIONS (L x W x H)	2.625" x 1.469" x 3.625"	2.625" x 1.469" x 3.406"	2.625" x 1.469" x 3.406"	2.625" x 1.469" x 3.406"	2.625" x 1.469" x 3.406"	2.625" x 1.469" x 3.406"	2.625" x 1.469" x 3.406"
FEATURES	- Low Power Design - Withstand 5 to 10 Times Coil Rating - Polycarbonate Cover - Front Removable Cover for Field Adj. - Ground Fault Sensor - Single Level Socket Wiring	- Plug-In Alarm Relay - All Electro-Mechanical Design - Operate from Normally Open or Normally Closed Trouble Contact - Clear Polycarbonate Cover - Sustained or Momentary Alarm - Single Level Socket Wiring	- Hybrid Design - Basic Logic Functions—AND, OR NOR - Reed Switch Output - S.S. Input Circuit - High Input/Output Isolation—Relay Coupled 3 Volt Noise Immunity - Overvoltage Protected Input to ± 50VDC - Reverse Polarity Protection - Single Level Socket Wiring - Overvoltage Protected Input to ± 50VDC	- Off-Return Memory Module - Hybrid Design - Reed Switch Outputs - S.S. Input Circuit - High Input/Output Isolation—Relay Coupled 3 Volt Noise Immunity - Overvoltage Protected Input to ± 50VDC - Self Logic Feature - Single Level Socket Wiring	- Time Delay—On - Time Delay—Off - Hybrid Design - Reed Switch Outputs - S.S. Input Circuit - High Input/Output Isolation—Relay Coupled 3 Volt Noise Immunity - Self Logic Feature - Overvoltage Protected Input - Single Level Socket Wiring	- AC Power Switching Modules 3A to 10A Switching to 240VAC - Solid State Power Output - Switch Closure Input - Single Level Socket Wiring	- AC Signal Conditioners - Adjustable Trip Point - AC Current Input—Model 111 - AC Voltage Input—Model 112 - Low Power Input - Reed Switch Output - Single Level Socket Wiring
CONTACT DATA							
Form:	Up to 2 Form C	1 Form A and 1 Form C	Up to 2 Form A or 2 Form B	2 Form A	2 Form A	1 Form A (Solid State Power Switch)	1 Form A
Material:	Fine Silver	Sil. Cad. Oxide	Rhodium	Rhodium	Rhodium	Model 109 110	Rhodium
Ratings:	120/AC 2A 240/AC 1A 30/DC 2A	120/AC 5A 30/DC 5A	250VDC max. 0.5A max. 10W max.	250VDC max. 0.5A max. 10W max.	250VDC max. 0.5A max. 10W max.	at up to 240/AC	250VDC max. 0.5 10W max.
COIL DATA							
AC Volts	1 to 225	6, 12, 24, 120	—	—	—	—	Model 111 112 0.5 to 5A 6 to 240V
DC Volts	0.08 to 21 (125VDC with series resistor)	6, 12, 24, 125	Signal Input 5 to 12VDC at 0.25mW	Signal Input 5 to 12VDC at 0.25mW	Signal Input 5 to 12VDC at 0.25mW	Switch Closure Only. Triggers Output	—
Power:							
AC VA	Single Pole 0.2 Double Pole 1.0	2.4	—	—	—	—	1 1
DC Watts	Single Pole 15mW Double Pole 65mW	2.4	—	—	—	—	—
GENERAL DATA							
Ambient Temp.:	-45°C to +65°C	-10°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C	-20°C to +70°C
Operate Time:	20 ms	25 ms max.	1 ms	1 ms	1 ms	—	1 ms
Release Time:	20 ms	20 ms max.	1 ms	1 ms	1 ms	—	1 ms
Life:							
Rated Load	100,000	500,000	10 million	10 million	10 million	100 million	10 million
No Load	500,000	20 million	100 million	100 million	100 million	—	100 million
OPTIONS	Special Pick-up and Drop-out Adjustments Series Coils to 10 Amps	Operate from N.O. Trouble Contact Operate from N.C. Trouble Contact	Other Contact Configurations Higher Contact Ratings Higher Supply Voltages—24 or 48VDC	Supply Voltages of 24 or 48VDC Set Pulse Prevalts Reset Pulse Prevalts Form B Contacts	Supply Voltages of 24 or 48VDC Form B Contacts	—	Supply Voltages of 24 or 48VDC Form B Contacts Model 111—Higher Current Input by Using 5A Current Transformer Model 112—Other Voltage Ranges Available
APPROVALS	—	—	—	—	—	—	—

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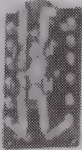
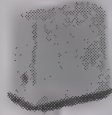
MSD, Inc.

MANUFACTURERS OF STRUTHERS-DUNN™
COMMERCIAL / INDUSTRIAL RELAY PRODUCTS

RELAY SELECTOR GUIDE

SCREW TERMINAL, 2-200 AMP, 1-4 POLE

LOW PWR COIL PLUG IN,
2 AMP, 1-2 POLE 3 AMP, 1 POLE

SERIES	A5	8/A8/84	C85	102/103	112	RRX164
						
DIMENSIONS (L x W x H)	7.000" x 4.000" x 3.000"	4.250" x 3.000" x 3.000"	5.000" x 3.000" x 2.625"	4.250" x 2.656" x 3.000"	2.375" x 2.500" x 2.625"	2.625" x 1.469" x 3.406"
FEATURES	- Latch (Memory) Relays with 600 Volt Spacing - Front Connected - Rugged Design	- General Purpose Relay for Heavy Industrial Use 600 Volt Spacing - Front Connected	- Heavy Duty Sequence Relay - Positive Action - Front Connected - Any Sequence Up to 12 Steps	- Heavy Duty DC Solenoid Type Contactors - To 200 Amp Switching - Enclosed Contacts	- Very Low Power Consumption - Withstand 5 to 10 Times Nominal Coil Rating - AC or DC Coils - Screw Terminals	- Ground Fault Current Sensor Hybrid Design 3 Amp Relay Contact Output - Adjustable Trip Point - Plug-In Device - Single Level Socket Wiring
CONTACT DATA Form: Material: Ratings:	2 Form C or up to 4 Form A/B Comb. Fine Silver	2 Form C or up to 4 Form A/B Comb. Fine Silver	2 Form A or 1 Form A & 1 Form B Fine Silver	1 Form X Sil. Cad. Oxide Model 102 103 100A 200A 100A 200A 100A 200A	1 Form A to 2 Form C Fine Silver	2 Form C Silver
120/AC 240/AC 30/DC	30A 30A 30A	30A 30A 30A	20A 20A 20A		2A 1A 2A	3A — 3A
COIL DATA AC Volts DC Volts Power: AC VA DC Watts	24 to 550 24 to 240 15 7	12 to 550 12 to 230 15 7	24 to 550 24 to 240 18 14	— 12, 28, 48 — Model 102 103 11.6 14	1 to 225 0.08 to 21 (125VDC with Resistor in Series) Single Pole 0.2 Double Pole 1.0 Single Pole 0.015 Double Pole 0.085	3 to 8A (Adjustable) Trip Point — Operates from Secondary of Current Transformer
GENERAL DATA Ambient Temp.: Operate Time: Release Time: Life: Rated Load No Load	—45°C to +65°C 50 ms 50 ms — 100,000 500,000	—45°C to +65°C 50 ms 30 ms — 100,000 500,000	—45°C to +65°C 50 ms 50 ms — 100,000 500,000	—45°C to +65°C 60 ms 30 ms — 100,000 500,000	—45°C to +65°C 20 ms 20 ms — 100,000 500,000	—10°C to +70°C 15 ms 25 ms — 500,000 50 million
OPTIONS	Manual Latch for Operate, Release (or both) Functions	Non-Standard Coils to 30A, AC or DC	7, 8, 9, 10, 11 and 12 Tooth Ratchets Available for Special Sequences, Non-Standard Coil Voltages	Other DC Coils AC Operation Form D Contact Form Y Contact	Special Pick-Up and Drop-Out Adjustments Heavy Series Coils to 50A	Time Delay on Operate Version Up to 10A Output Contacts
APPROVALS	—	UL, CSA	—	—	UL, CSA	—

**THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS
WE HAVE AVAILABLE. PLEASE
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PRINTED CIRCUIT TERMINAL REED, 0.25-1 AMP, 1-4 POLE

SERIES	MRR-D	MRRQ	MR-Y	MRRK	MRRN	MRR	RR	RRN
DIMENSIONS (L x W x H)	0.750" x 0.300" x 0.275"	0.750" x 0.250" x 0.260"	0.950" x 0.400" x 0.312"	1.290" x 0.660" x 0.445"	1.125" x 0.609 x 0.375"	1.062" x 0.425" Dia.	1.875" x 0.655" Dia.	2.500" x 0.740" x 0.641"
FEATURES	- Epoxy Molded 8 or 14 Pin Designs 14 Pin DIP Socket Compatible - DTL, TTL and HNIL Compatible - Magnetic Shielding - Low Cost - Form A, Form B or Form C Contacts	- Epoxy Molded—4 Term. Design 14-Pin Dip Socket Mount (2-Side by Side) - Form A or B Contacts - Magnetic Shielding - DTL, TTL and HNIL Compatible	- Epoxy Molded—End Termination 0.100 or 0.150 Grid Spacing - Magnetic Shielding - DTL, TTL and HNIL Compatible	- KEL-F Enclosure Ultrasonically Sealed - Magnetic Shielding 0.1" Grid Spacing - Minimal Switch Stress - Thermal Stability	- Miniature-Open Construction - Magnetic Shielding 0.1" Grid Terminals - Single Piece, Glass-Filled Nylon Bobbin and Terminal Support - Terminals are Non-Magnetic	- Epoxy Molded—Axial Lead - Magnetic Shielding - Standard Size	- Epoxy Molded—Axial Lead - Magnetic Shielding - Standard Size	- Standard-Open Construction - Magnetic Shielding 0.2" Grid Spacing - Single Piece, Glass-Filled Nylon Bobbin and Terminal Support - Terminals are Non-Magnetic
CONTACT DATA								
Form:	1 Form A 2 Form A 1 Form B 1 Form C	1 Form A or 1 Form B	1 Form A to 2 Form C	1 Form A to 3 Form A 2 Form B or 2 Form C	1 Form A to 4 Form A 1 Form C to 3 Form C	1, 2, 4 or 12 Form A	1, 2 or 4 Form A; 1 Form B	1 Form A to 4 Form A 1 Form C to 3 Form C
Material:	Rhodium	Rhodium	Rhodium	Rhodium	Rhodium	Rhodium	Rhodium	Rhodium
Ratings:								
Volts (max)	Form A/B | Form C 100 | 28	100	Form A/B | Form C 200 | 28	Form A/B | Form C 200 | 28	Form A/B | Form C 200 | 28	200	250	Form A/B | Form C 250 | 250
Amps (max)	0.5 | 0.25	0.5	0.5 | 0.25	0.5 | 0.25	0.5 | 0.25	0.5	1.0	1.0 | 0.5
Watts (max)	10 | 3	10	10 | 3	10 | 3	10 | 3	10	15	15 | 10
COIL DATA								
AC Volts	—	—	—	—	—	—	—	—
DC Volts	5 to 24	5 to 24	5 to 24	6 to 48	6 to 48	6 to 48	6 to 48	6 to 48
Power:								
AC VA	—	—	—	—	—	—	—	—
DC mW	50 to 280	50 to 280	270 (1 Contact) 450 (2 Contacts)	360	189 to 900 depending on No. of Contacts	125 to 1,500 depending on No. of Contacts	400 to 1,500 depending on No. of Contacts	240 to 1,000 depending on No. of Contacts
GENERAL DATA								
Ambient Temp.:	—40°C to +85°C	—40°C to +85°C	—40°C to +85°C	—40°C to +85°C	—40°C to +85°C	—40°C to +85°C	—40°C to +85°C	—40°C to +85°C
Operate Time:	2 ms	1 ms	2 ms	2 ms	5 ms	2 to 10 ms depending on No. of Contacts	2 to 5 ms depending on No. of Contacts	6 ms
Release Time:	2 ms	1 ms	2 ms	1.5 ms	3 ms	1 to 5 ms depending on No. of Contacts	1 to 4 ms depending on No. of Contacts	3 ms
Dielectric (VDC)								
Across Gap	Form A/B | Form C 150 | 100	Form A/B 150	Form A/B | Form C 300 | 200	Form A/B | Form C 300 | 200	Form A/B | Form C 400 | 250	400	600	500
Contact/Coil To Ground	1,500 | 1,500	1,500	1,500 | 1,500	1,500 | 1,500	1,500 | 1,500	1,500	1,500	1,500
Insulation Resistance:	1,000 Megohms	1,000 Megohms	1,000 Megohms	1,000 Megohms	1,000 Megohms	1,000 Megohms	1,000 Megohms	1,000 Megohms
Life:								
Rated Load	5 million	5 million	Form A/B | Form C 10 mill. | 5 mill.	Form A/B | Form C 10 mill. | 5 mill.	Form A/B | Form C 10 mill. | 10 mill.	10 million	10 million	Form A/B | Form C 10 mill. | 10 mill.
No Load	20 million	20 million	100 mill. | 50 mill.	100 mill. | 50 mill.	200 mill. | 50 mill.	200 million	200 million	200 mill. | 50 mill.
OPTIONS	Suppression Diode Electrostatic Shield 50 MW Coil Sensitivity Magnetic Latch Versions Mercury Switch MIL-Spec. Qualified	Internal Suppression Diode Electrostatic Shield Mercury Switch	Low Power Coils Internal Suppression Diode Electrostatic Shield Mercury Switch	Internal Suppression Diode Electrostatic Shield Mercury Switch	Special Wiring Internal Suppression Diode Electrostatic Shield Magnetic Latch Version	Pre-Formed Leads Welded Lead Extensions	Pre-Formed Leads Welded Lead Extensions	Special Wiring Internal Suppression Diode Electrostatic Shield Magnetic Latch Version
APPROVALS	UL	—	—	—	UL	—	—	—

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.

SERIES 10 (AC) AND 11 (DC) GENERAL PURPOSE PLUG-IN RELAYS

Series 10 and 11 relays with "B" suffix have push to test button; those with "H" suffix are hermetically sealed, and those with "N" suffix have an indicator lamp.

* Test Button (B-Suffix Only)

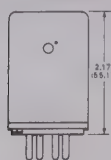


Fig. R20

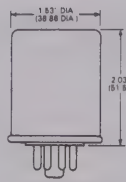


Fig. R21

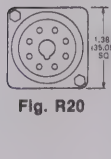


Fig. R20-1 (3PDT)

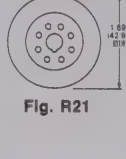
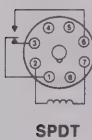
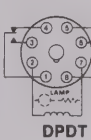


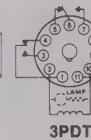
Fig. R20-2 (3PDT)



SPDT



DPDT



3PDT

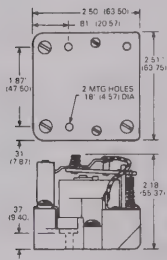


Fig. R22

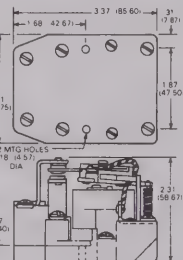


Fig. R23

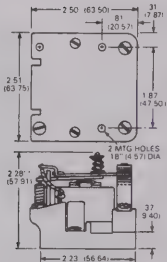


Fig. R22-1 (AH.)

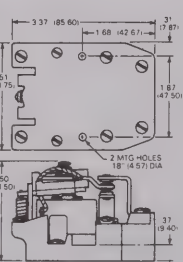


Fig. R23-1 (AH.)



SPDT



DPST-NO



DPDT

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage	Typ. Res. (Ohms)	Nom. Power	Arrang.	Max. Curr. 'a 28 VDC, 120 VAC (A)		
SERIES 10 RATINGS (AC INPUT)							
RLY1022	12 VAC	.....	2 VA	SPDT	10	R20	\$11.35
RLY1023	24 VAC	.....	2 VA	SPDT	10	R20	11.35
RLY1025	120 VAC	.....	2 VA	SPDT	10	R20	11.59
RLY1041	6 VAC	.....	2 VA	DPDT	10	R20	12.90
RLY1042	12 VAC	.....	2 VA	DPDT	10	R20	12.90
RLY1043	24 VAC	.....	2 VA	DPDT	10	R20	12.90
RLY1043B	24 VAC	.....	2 VA	DPDT	10	R20	12.90
RLY1043H	24 VAC	.....	3 VA	DPDT	10	R21	44.07
RLY1043N	24 VAC	.....	2 VA	DPDT	10	R20	16.50
RLY1045	120 VAC	.....	2 VA	DPDT	10	R20	13.00
RLY1045B	120 VAC	.....	2 VA	DPDT	10	R20	13.17
RLY1045H	120 VAC	.....	3 VA	DPDT	10	R21	47.94
RLY1045N	120 VAC	.....	2 VA	DPDT	10	R20	16.31
RLY1046	240 VAC	.....	2 VA	DPDT	10	R20	13.21
RLY1052	12 VAC	.....	2.75 VA	3PDT	10	R20-1	15.51
RLY1053	24 VAC	.....	2.75 VA	3PDT	10	R20-1	15.51
RLY1053B	24 VAC	.....	2.75 VA	3PDT	10	R20-1	16.12
RLY1055	120 VAC	.....	2.75 VA	3PDT	10	R20-1	15.94
RLY1055B	120 VAC	.....	2.75 VA	3PDT	10	R20-1	16.60
RLY1055H	120 VAC	.....	3 VA	3PDT	10	R21-1	51.60
RLY1055N	120 VAC	.....	2.75 VA	3PDT	10	R20-1	17.93

SERIES 11 RATINGS (DC INPUT)

RLY1121	6 VDC	30	1.2 W	SPDT	10	R20	\$11.17
RLY1122	12 VDC	120	1.2 W	SPDT	10	R20	11.17
RLY1123	24 VDC	470	1.2 W	SPDT	10	R20	11.17
RLY1141	6 VDC	30	1.2 W	DPDT	10	R20	11.98
RLY1142	12 VDC	120	1.2 W	DPDT	10	R20	12.83
RLY1142B	12 VDC	120	1.2 W	DPDT	10	R20	12.83
RLY1142H	12 VDC	100	1.5 W	DPDT	10	R21	43.43
RLY1142N	12 VDC	120	1.2 W	DPDT	10	R20	14.83
RLY1143	24 VDC	470	1.2 W	DPDT	10	R20	12.83
RLY1143B	24 VDC	470	1.2 W	DPDT	10	R20	12.83
RLY1143N	24 VDC	470	1.2 W	DPDT	10	R20	15.42
RLY1145	110 VDC	10,000	1.2 W	DPDT	10	R20	13.59
RLY1145H	110 VDC	8,000	1.5 W	DPDT	10	R21	44.00
RLY1152	12 VDC	120	1.2 W	3PDT	10	R20-1	15.75
RLY1152B	12 VDC	120	1.2 W	3PDT	10	R20-1	15.92
RLY1153	24 VDC	470	1.2 W	3PDT	10	R20-1	15.75
RLY1153B	24 VDC	240	1.2 W	3PDT	10	R20-1	15.92

ACCESSORIES—SOCKETS

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9113	DIN Rail Mount,	8-Pin Octal	SPDT, DPDT	\$4.06
RLY9114	Screw Terminals	11-Pin Octal	3 PDT	5.88
RLY9101	Surface Mount,	8-Pin Octal	SPDT, DPDT	4.51
RLY9104	Screw Terminals	11-Pin Octal	3PDT	7.92
RLY9118	Panel Mount,	8-Pin Octal	SPDT, DPDT	1.25
RLY9119	Solder Terminals	11-Pin Octal	3PDT	1.49

SERIES 12 (AC) AND 13 (DC) HEAVY DUTY, POWER RELAYS

Series 12 and 13 relays are for motor starting and incandescent lamp loads. The relays are IC logic compatible, have screw terminals and 30 amp contacts.

Type No.	Coils			Contacts Arrang.	Fig. No.	Price Each
	Input Voltage	Typ. Res. (Ohms)	Nom. Power			
SERIES 12 RATINGS (AC INPUT)						
RLY1222	12 VAC	.....	10 VA	SPDT	R22*	\$12.67
RLY1223	24 VAC	.....	10 VA	SPDT	R22*	12.67
RLY1225	120 VAC	.....	10 VA	SPDT	R22*	12.67
RLY1226	240 VAC	.....	10 VA	SPDT	R22*	13.72
RLY1232	12 VAC	.....	10 VA	DPST-NO	R22*	13.34
RLY1233	24 VAC	.....	10 VA	DPST-NO	R22*	13.34
RLY1235	120 VAC	.....	10 VA	DPST-NO	R22*	13.34
RLY1236	240 VAC	.....	10 VA	DPST-NO	R22*	13.97
RLY1242	12 VAC	.....	10 VA	DPDT	R23†	16.82
RLY1243	24 VAC	.....	10 VA	DPDT	R23†	16.82
RLY1244	120 VAC	.....	10 VA	DPDT	R23†	17.00

SERIES 13 RATINGS (DC INPUT)

RLY1322	12 VDC	70	2 W	SPDT	R22*	\$12.67
RLY1323	24 VDC	290	2 W	SPDT	R22*	12.67
RLY1325	110 VDC	6,000	2 W	SPDT	R22*	14.31
RLY1332	12 VDC	70	2 W	DPST-NO	R22*	13.09
RLY1333	24 VDC	290	2 W	DPST-NO	R22*	13.09
RLY1335	110 VDC	6,000	2 W	DPST-NO	R22*	14.79
RLY1342	12 VDC	70	2 W	DPDT	R23†	16.36
RLY1343	24 VDC	290	2 W	DPDT	R23†	16.36
RLY1344	48 VDC	1,200	2 W	DPDT	R23†	17.37

*Alternate Fig. No. R22-1. †Alternate Fig. No. R23-1.

SERIES 14 (AC) AND 15 (DC) GENERAL PURPOSE OPEN FRAME RELAYS

Series 14 and 15 relays are compact and multicontact. They include solder terminals and are supplied with studs or tapped mounting holes. **Maximum Contact Ratings:** AC (Resistive): 10 A (a 120 VAC, 6 A (a 240 VAC. **Operating Temperature:** -10°C to +55°C. **Initial Breakdown Voltage:** 1000 Vrms between open contacts. 1500 Vrms between all other elements.

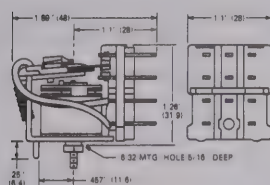
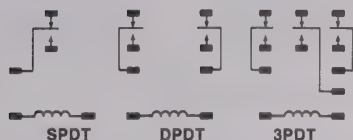


Fig. R24



* Test Button (8-Suffix Only)

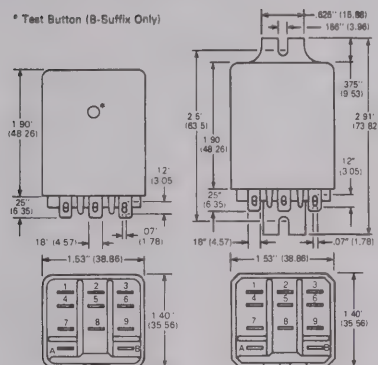
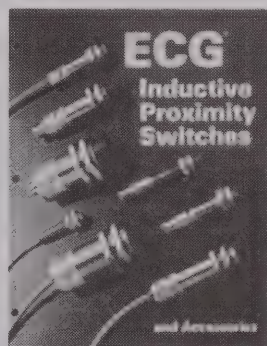
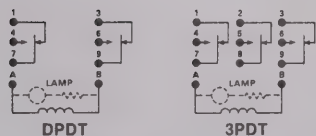


Fig. R26

Fig. R26-1



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ECG PRODUCTS.**

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage	Typ. Res. (Ohms)	Nom. Power	Arrang.	Max. Curr. (1) 28 VDC 120 VAC (Amps)		

SERIES 14 RATINGS (AC INPUT)

RLY1422	12 VAC	.....	2 VA	SPDT	10	R24	\$ 8.63
RLY1423	24 VAC	.....	2 VA	SPDT	10	R24	8.63
RLY1425	120 VAC	.....	2 VA	SPDT	10	R24	9.65
RLY1442	12 VAC	.....	2 VA	DPDT	10	R24	9.92
RLY1443	24 VAC	.....	2 VA	DPDT	10	R24	9.92
RLY1445	120 VAC	.....	2 VA	DPDT	10	R24	11.32
RLY1448	240 VAC	.....	2 VA	DPDT	10	R24	12.19
RLY1451	6 VAC	.....	2 VA	3PDT	10	R24	13.20
RLY1452	12 VAC	.....	2 VA	3PDT	10	R24	13.20
RLY1453	24 VAC	.....	2 VA	3PDT	10	R24	12.97
RLY1455	120 VAC	.....	2 VA	3PDT	10	R24	13.36
RLY1456	240 VAC	.....	2 VA	3PDT	10	R24	14.68
RLY1495	120 VAC	.....	2 VA	DPDT	5	R24	10.83

SERIES 15 RATINGS (DC INPUT)

RLY1520	5-6 VDC	30	1 W	SPDT	10	R24	\$ 8.37
RLY1522	12 VDC	120	1 W	SPDT	10	R24	8.37
RLY1523	24 VDC	470	1 W	SPDT	10	R24	8.37
RLY1540	5-6 VDC	30	1 W	DPDT	10	R24	10.25
RLY1542	12 VDC	120	1 W	DPDT	10	R24	10.25
RLY1543	24 VDC	470	1 W	DPDT	10	R24	11.14
RLY1544	48 VDC	2,000	1 W	DPDT	10	R24	11.46
RLY1550	5-6 VDC	30	1 W	3PDT	10	R24	12.83
RLY1552	12 VDC	120	1 W	3PDT	10	R24	13.81
RLY1553	24 VDC	470	1 W	3PDT	10	R24	13.81
RLY1555	110 VDC	10,000	1 W	3PDT	10	R24	14.71

SERIES 18 (AC) GENERAL PURPOSE RELAYS

Series 18 relays include clear plastic dust covers, .187" quick connect terminals and multicontacts. Relays are either socketable or solderable. B-suffix relays come with a push to test button, F-suffix relays come with flange mount and N-suffix relays come with an indicator lamp. **Operating Temperature:** -30°C to +50°C. **Initial Breakdown Voltage:** 500 Vrms between open contacts, 1000 Vrms between all other elements.

Type No.	Coils		Contacts		Fig. No.	Price Each
	Input Voltage	Nom. Power	Arrang.	Max. Curr. (at 28 VDC 240 VAC (Amps))		
RLY1843	24 VAC	2 VA	DPDT	10	R26	\$ 8.88
RLY1843B	24 VAC	2 VA	DPDT	12	R26	8.88
RLY1843F	24 VAC	2 VA	DPDT	12	R26-1	9.01
RLY1843N*	24 VAC	2 VA	DPDT	12	R26	11.16
RLY1845	120 VAC	2 VA	DPDT	10	R26	8.96
RLY1845B	120 VAC	2 VA	DPDT	12	R26	9.04
RLY1845F	120 VAC	2 VA	DPDT	12	R26-1	9.10
RLY1845N*	120 VAC	2 VA	DPDT	12	R26	11.85
RLY1846	240 VAC	2 VA	DPDT	10	R26	10.02
RLY1853	24 VAC	2.7 VA	3PDT	10	R26	10.19
RLY1853B	24 VAC	2.7 VA	3PDT	10	R26	10.27
RLY1853F	24 VAC	2.7 VA	3PDT	11	R26-1	10.34
RLY1853N*	24 VAC	2.7 VA	3PDT	10	R26	12.53
RLY1855	120 VAC	2.7 VA	3PDT	10	R26	10.49
RLY1855B	120 VAC	2.7 VA	3PDT	10	R26	10.47
RLY1855F	120 VAC	2.7 VA	3PDT	11	R26-1	10.47
RLY1855N*	120 VAC	2.7 VA	3PDT	10	R26	12.80
RLY1856	240 VAC	2.7 VA	3PDT	10	R26	11.81

* Indicator lamp for voltage to coil.

ACCESSORIES—SOCKETS FOR SERIES 18

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9115	DIN Rail Mount, Screw Terminals	11-Pin Blade	All	\$6.60
RLY9105	Surface Mount, Screw Terminals	11-Pin Blade	All	8.68
RLY9116	Panel Mount, Solder Terminals	11-Pin Blade	All	1.48
RLY9124	Panel Mount, Solder Terminals	11-Pin Blade	All	2.84
RLY9123	PC Mount Solder Terminals	11-Pin Blade	All	1.84

Note: Sockets not for F relays.

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SEMICONDUCTOR CROSS REFERENCE ON DISKETTE.**

SERIES 16 (AC) AND 17 (DC) HEAVY DUTY, OPEN FRAME POWER RELAYS

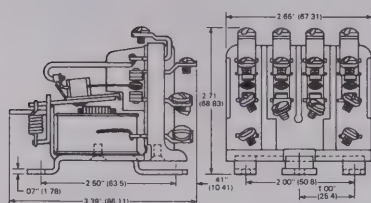


Fig. R25



4PDT

* Test Button (B-Suffix Only)

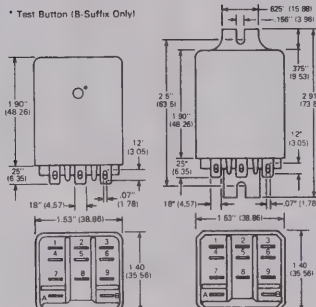
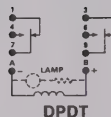
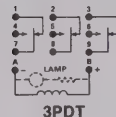


Fig. R26

Fig. R26-1



DPDT



3PDT

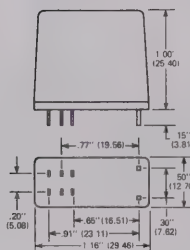


Fig. R31



DPDT

Series 16 and 17 relays offer single or polyphase service and high dielectric strength. The relays feature buzz-free, shaded AC coils and arc-over barriers between each contact. **Operating Temperature:** -55°C to $+45^{\circ}\text{C}$ (Series 16) and -55°C to $+55^{\circ}\text{C}$ (Series 17). **Initial Breakdown Voltage:** 2000 Vrms between all elements and ground.

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage	Typ. Res. (Ohms)	Nom. Power	Arrang.	Max. Curr. $\leq$ 28 VDC 240 VAC (Amps)		

SERIES 16 RATINGS (AC INPUT)

RLY1663	24VAC	.....	18 VA	4PDT	25	R25	\$54.30
RLY1665	120VAC		18 VA	4PDT	25	R25	\$4.45

SERIES 17 RATINGS (DC INPUT)

RLY1763	24VDC	130	4.4W	4PDT	25	R25	\$50.64
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SERIES 19 (DC) GENERAL PURPOSE RELAYS

Series 19 relays feature clear plastic dust covers, .187" quick connect terminals, multicontacts, push to test buttons (B-suffix), flange mounts (F-suffix) and indicator lamps (N-suffix). Relays are either socketable or solderable. **Operating Temperature:** -30°C to $+65^{\circ}\text{C}$. **Initial Breakdown Voltage:** 500 Vrms (between open contacts), 1000 Vrms (between all other elements).

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage	Typ. Res. (Ohms)	Nom. Power (Watts)	Arrang.	Max. Curr. $\leq$ 28 VDC 240 VAC (Amps)		
RLY1942	12 VDC	120	1.2	DPDT	10	R26	\$ 8.56
RLY1942B	12 VDC	120	1.2	DPDT	12	R26	8.48
RLY1942F	12 VDC	120	1.2	DPDT	12	R26-1	8.53
RLY1943	24 VDC	470	1.2	DPDT	10	R26	8.53
RLY1943B	24 VDC	470	1.2	DPDT	12	R26	8.53
RLY1943F*	24 VDC	470	1.2	DPDT	12	R26-1	8.53
RLY1943N*	24 VDC	470	1.2	DPDT	12	R26	11.64
RLY1945	110 VDC	10000	1.2	DPDT	10	R26	9.66
RLY1952	12 VDC	120	1.2	3PDT	10	R26	9.88
RLY1952B	12 VDC	120	1.2	3PDT	10	R26	9.88
RLY1952F	12 VDC	120	1.2	3PDT	11	R26-1	9.98
RLY1953	24 VDC	470	1.2	3PDT	10	R26	9.88
RLY1953B	24 VDC	470	1.2	3PDT	10	R26	9.88
RLY1953F	24 VDC	470	1.2	3PDT	11	R26-1	9.98
RLY1953N*	24 VDC	470	1.2	3PDT	10	R26	12.77
RLY1955	110 VDC	10000	1.2	3PDT	10	R26	12.42

ACCESSORIES-SOCKETS

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9115	DIN Rail Mount, Screw Terminals	11-Pin Blade	All	\$6.60
RLY9105	Surface Mount, Screw Terminals	11-Pin Blade	All	8.68
RLY9116	Panel Mount, Solder Terminals	11-Pin Blade	All	1.48
RLY9124	Panel Mount, Solder Terminals	11-Pin Blade	All	2.84
RLY9123	PC Mount, Solder Terminals	11-Pin Blade	All	1.84

Note: Sockets not for F suffix relays.

SERIES 31 (DC) PC MOUNTABLE RELAYS

The Series 31 relay features a clear plastic dust cover and low coil power. The relay comes in a compact size. **Operating Temperature:** -45°C to $+75^{\circ}\text{C}$. **Initial Breakdown Voltage:** 500 Vrms (between open contacts), 1500 Vrms (between all other elements).

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage	Typ. Res. (Ohms)	Nom. Power (mW)	Arrang.	Max. Curr. $\leq$ 28 VDC 240 VAC (Amps)		
RLY3140	5-6 VDC	25	800	DPDT	6	R31	\$10.44
RLY3142	12 VDC	170	800	DPDT	6	R31	10.44
RLY3143	24 VDC	740	800	DPDT	6	R31	10.44

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* Test Button (B-Suffix Only)

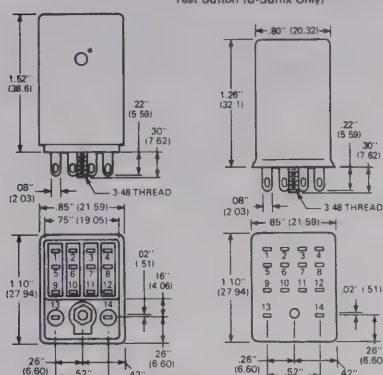


Fig. R27

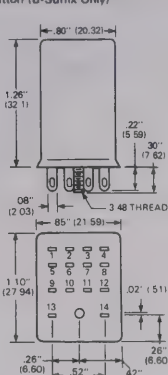


Fig. R27-1



P-Suffix Relays

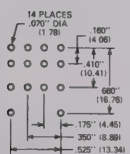
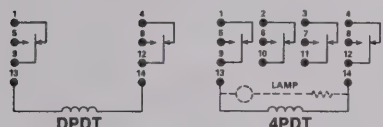
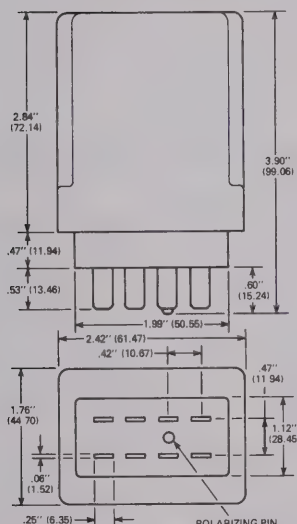
Printed Circuit
Layout-4PDT

Fig. R30



SERIES 20 (AC) AND 21 (DC) GENERAL PURPOSE MULTICONTACT RELAYS

Series 20 and 21 are compact, rugged relays with clear plastic dust covers and are either socketable or solderable. Options include hermetically sealed metal case (H-suffix), PC mountable (P-suffix), push to test button (B-suffix), and indicator lamp (N-suffix). **Operating Temperature:** -40°C to +50°C (20 Series), -40°C to +55°C (21 Series). **Initial Breakdown Voltage:** 1000 Vrms (between open contacts). 1500 Vrms (between all other elements).

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage	Typ. Res. (Ohms)	Nom. Power	Arrang.	Max. Curr. at 28 VDC 240 VAC (Amps)		
SERIES 20 RATINGS (AC INPUT)							
RLY2043	24 VAC	.....	1.65 VA	DPDT	5	R27	\$ 7.32
RLY2045	120 VAC	.....	1.65 VA	DPDT	5	R27	7.79
RLY2062	12 VAC	.....	1.65 VA	4PDT	3	R27	8.75
RLY2062P	12 VAC	.....	1.65 VA	4PDT	3	R27	8.75
RLY2063	24 VAC	.....	1.65 VA	4PDT	3	R27	12.70
RLY2063B	24 VAC	.....	1.65 VA	4PDT	5	R27	9.34
RLY2063N*	24 VAC	.....	1.65 VA	4PDT	5	R27	11.00
RLY2063P	24 VAC	.....	1.65 VA	4PDT	3	R27	9.49
RLY2065	120 VAC	.....	1.65 VA	4PDT	3	R27	12.70
RLY2065B	120 VAC	.....	1.65 VA	4PDT	5	R27	9.53
RLY2065H	120 VAC	.....	1.65 VA	4PDT	5	R27-1	32.58
RLY2065N*	120 VAC	.....	1.65 VA	4PDT	5	R27	11.68
RLY2065P	120 VAC	.....	1.65 VA	4PDT	3	R27	9.49

RLY2142	12 VDC	160	900 mW	DPDT	5	R27	\$ 7.53
RLY2143	24 VDC	650	900 mW	DPDT	5	R27	7.53
RLY2160	5-6 VDC	40	900 mW	4PDT	3	R27	8.62
RLY2160P	5-6 VDC	40	900 mW	4PDT	3	R27	8.62
RLY2162	12 VDC	160	900 mW	4PDT	3	R27	10.89
RLY2162B	12 VDC	160	900 mW	4PDT	5	R27	9.63
RLY2162H	12 VDC	160	900 mW	4PDT	5	R27-1	27.96
RLY2162N†	12 VDC	160	900 mW	4PDT	5	R27	10.96
RLY2162P	12 VDC	160	900 mW	4PDT	3	R27	9.53
RLY2163	24 VDC	650	900 mW	4PDT	3	R27	10.89
RLY2163B	24 VDC	650	900 mW	4PDT	5	R27	9.63
RLY2163H	24 VDC	650	900 mW	4PDT	5	R27-1	27.96
RLY2163N†	24 VDC	650	900 mW	4PDT	5	R27	10.96
RLY2163P	24 VDC	650	900 mW	4PDT	3	R27	9.53

*incandescent indicator lamp for voltage to coil. †LED for voltage to coil.

ACCESSORIES-SOCKETS

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9117	DIN Rail Mount, Screw Terminals	14-Pin Blade	All	\$7.47
RLY9106A	Surface Mount, Screw Terminals	14-Pin Blade	All	7.73
RLY9122	Panel Mount, Solder Terminals	14-Pin Blade	All	1.15
RLY9107	PC Mount, Solder Terminals	14-Pin Blade	All	1.48

SERIES 28 (AC) HEAVY DUTY POWER RELAY FOR VEHICULAR TRAFFIC CONTROL SYSTEMS

Series 28 conforms to Federal Highway Specification FHWA-IP-78-16, "Heavy Duty Relays, Model 430" and to Item 10.5.3, "Flash Transfer Relay." It switches Tungsten lamp loads and comes with Jones Plug terminals, plus a clear plastic dust cover. **Maximum Contact Ratings:** 30 amps (α 120/240 VAC, 2.4 kW (α 120/240 VAC; tungsten lamp, 20 A. **Operating Temperature:** -40°C to $+80^{\circ}\text{C}$. **Initial Breakdown Voltage:** 500 Vrms (between open contacts), 1500 Vrms (between all other elements).

Type No.	Colls		Contacts			Fig. No.	Price Each
	Input Voltage (VAC)	Nom. Power (VA)	Arrang.	Current <i>at</i> 28 VDC (Amps)	Current <i>at</i> 240 VAC (Amps)		
RLY2845	120	8	DPDT	20	30	R30	\$48.66

ACCESSORIES-SOCKETS

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9112	Panel Mount, Solder Terminals	8-Pin Jones Plug	All	\$10.13

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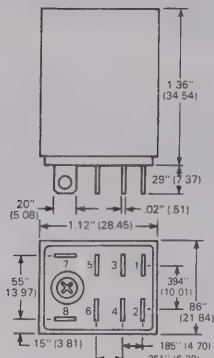


Fig. R28

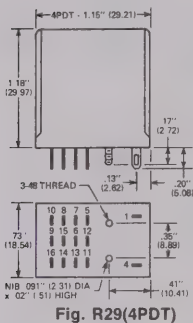
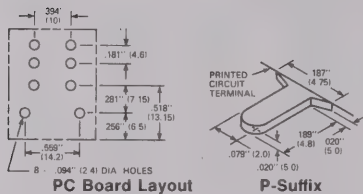
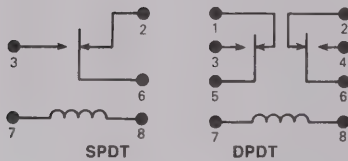


Fig. R29(4PDT)

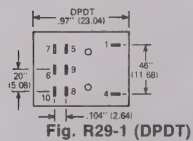


Fig. R29-1 (DPDT)

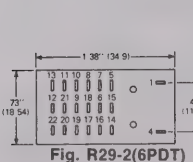


Fig. R29-2(6PDT)



P-Suffix-Relays

SERIES 22 (AC) AND 23 (DC) GENERAL PURPOSE RELAYS

Series 22 and 23 relays have an expected life of 50 million mechanical operations. The 10 or 15 amp relays are socketable or solderable and come with a clear plastic dust cover and .187" quick connect. P-suffix relays are PC mountable. **Operating Temperature:** -30°C to +55°C.

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage	Typ. Res. (Ohms)	Nom. Power	Arrang.	Max. Curr. <i>(a)</i> 28 VAC 240 VAC (Amps)		
SERIES 22 RATINGS (AC INPUT)							
RLY2223	24 VAC	.....	1.2 VA	SPDT	15	R28	\$7.37
RLY2225	120 VAC	.....	1.2 VA	SPDT	15	R28	7.69
RLY2226	240 VAC	.....	1.2 VA	SPDT	15	R28	9.82
RLY2242	12 VAC	.....	1.2 VA	DPDT	10	R28	8.47
RLY2242P	12 VAC	.....	1.2 VA	DPDT	10	R28	8.47
RLY2243	24 VAC	.....	1.2 VA	DPDT	10	R28	8.47
RLY2243P	24 VAC	.....	1.2 VA	DPDT	10	R28	8.47
RLY2245	120 VAC	.....	1.2 VA	DPDT	10	R28	8.58
RLY2245P	120 VAC	.....	1.2 VA	DPDT	10	R28	8.58

SERIES 23 RATINGS (DC INPUT)							
RLY2322	12 VDC	160	.9 W	SPDT	15	R28	\$7.40
RLY2323	24 VDC	650	.9 W	SPDT	15	R28	7.40
RLY2340	5-6 VDC	40	.9 W	DPDT	10	R28	7.79
RLY2340P	5-6 VDC	40	.9 W	DPDT	10	R28	7.79
RLY2342	12 VDC	160	.9 W	DPDT	10	R28	7.89
RLY2342P	12 VDC	160	.9 W	DPDT	10	R28	7.89
RLY2343	24 VDC	650	.9 W	DPDT	10	R28	7.89
RLY2343P	24 VDC	650	.9 W	DPDT	10	R28	7.89

ACCESSORIES—SOCKETS

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9121	DIN Rail Mount, Screw Terminals	8-Pin Blade	All	\$5.21
RLY9110	Surface Mount, Screw Terminals	8-Pin Blade	All	7.36
RLY9111	Panel Mount, Solder Terminals	8-Pin Blade	All	1.76
RLY9120	PC Mount, Solder Terminals	8-Pin Blade	All	1.54

SERIES 24 (AC), 25 (DC) AND 27 (DC) GENERAL PURPOSE RELAYS

Series 24 and 25 relays feature 5 A contacts, while Series 27 features 3 A contacts. All models have an expected life of 100 million mechanical operations. All models are socketable or solderable and come with clear plastic dust covers. P-suffix relays are PC mountable. **Operating Temperature:** -40°C to +75°C.

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage	Typ. Res. (Ohms)	Nom. Power	Arrang.	Max. Curr. @ 28 VDC 120 VAC (Amps)*		
SERIES 24 RATINGS (AC INPUT)							
RLY2445	120 VAC	.....	3 VA	DPDT	5	R29-1	\$14.75
RLY2465	120 VAC	.....	3 VA	4PDT	5	R29	17.65
SERIES 25 RATINGS (DC INPUT)							
RLY2540	5-6 VDC	50	.5 W	DPDT	5	R29-1	\$ 7.49
RLY2542	12 VDC	185	.75 W	DPDT	5	R29-1	7.49
RLY2543	24 VDC	700	1 W	DPDT	5	R29-1	7.49
RLY2560	5-6 VDC	50	.5 W	4PDT	5	R29	9.61
RLY2562	12 VDC	185	.75 W	4PDT	5	R29	9.61
RLY2563	24 VDC	700	1 W	4PDT	5	R29	9.61
RLY2572	12 VDC	90	1 W	6PDT	5	R29-2	12.35
RLY2573	24 VDC	430	1 W	6PDT	5	R29-2	12.35

SERIES 27 RATINGS (DC INPUT)							
RLY2742	12 VDC	185	.75 W	DPDT	3	R29-1	\$ 7.44
RLY2742P	12 VDC	185	.75 W	DPDT	3	R29-1	7.44
RLY2743	24 VDC	700	1 W	DPDT	3	R29-1	7.44
RLY2743P	24 VDC	700	1 W	DPDT	3	R29-1	7.44
RLY2762	12 VDC	185	.75 W	4PDT	3	R29	8.73
RLY2763	24 VDC	700	1 W	4PDT	3	R29	8.73

*Series 27 UL and CSA rated at 2 A.

ACCESSORIES—SOCKETS

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9103	Panel Mount, Solder Terminals	10-Pin Blade	DPDT	\$2.18
RLY9109		16-Pin Blade	4PDT	2.70
RLY9134		22-Pin Blade	6PDT	1.88
RLY9102	PC Mount, Solder Terminals	10-Pin Blade	DPDT	2.18
RLY9108		16-Pin Blade	4PDT	2.70
RLY9135		22-Pin Blade	6PDT	1.88

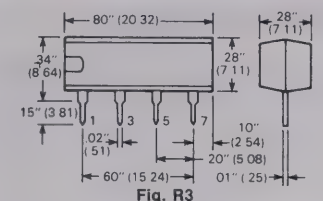


Fig. R3

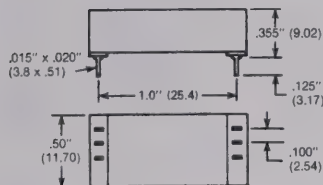


Fig. R5-1



Fig. R5

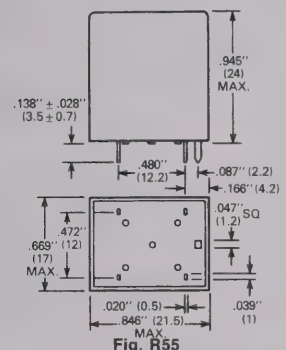


Fig. R55

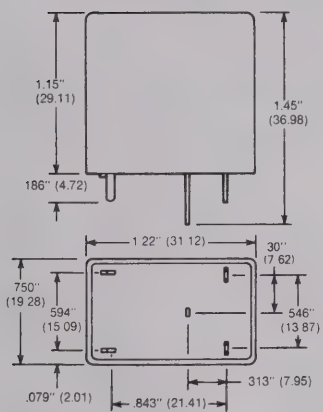


Fig. R56

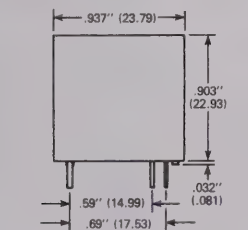


Fig. R64

SERIES 53 (DC) PC MOUNTABLE SIP (REED) RELAYS

Series 53 relays are TTL compatible and are suitable for input/output isolation and voltage level shifting applications. Relays are shock and vibration resistant, and they come with an internal clamping diode. **Operating Temperature:** -45°C to +85°C. **Initial Breakdown Voltage:** 1000 VDC (between coil and contact). **Typical Pull-In Time:** 350 µsec. **Typical Release Time:** 150 µsec.

Type No.	Nom. Coil Voltage (VDC)	Typ. Coil Res. (Ohms)	Pull-In Voltage (VDC)	Release Voltage (VDC)	Contact Current @ 28 VDC (ma)*	Contact Arrang.	Fig. No.	Price Each
RLY5310C	5-6	500	3.75	.5	500	SPST	R3	\$4.93
RLY5312C	12	1900	9.0	1.0	500	SPST	R3	4.92
RLY5313C	24	3200	18.0	2.0	500	SPST	R3	4.99

*100 VAC/AC peak max. contact.

SERIES 55 (DC) PC MOUNTABLE REED RELAYS

Series 55 relays come with standard .1 inch terminal spacing, 10 W contact rating and magnetic shield. Relays are TTL compatible. **Operating Temperature:** -45°C to +85°C. **Initial Breakdown Voltage:** 200 Vrms (between contacts), 500 Vrms (between coil and contact). **Maximum Switching Volts:** 200 VDC. **Maximum Resistive Load:** 10 VA.

Type No.	Coils			Contacts			Fig. No.	Price Each
	Input Voltage (DC)	Typ. Res. (Ohms)	Nom. Power (mW)	Arrang.	Switching Current Max. (A)	Carry Current (A)		
RLY5510	5-6	500	360	SPST	.5	2	R5	\$6.09
RLY5512	12	430	360	SPST	.5	2	R5	5.19
RLY5513	24	2300	360	SPST	.5	2	R5	5.19
RLY5530	5-6	70	510	DSPT	.5	2	R5-1	6.27
RLY5532	12	280	510	DPST	.5	2	R5-1	6.27
RLY5533	24	1500	510	DPST	.5	2	R5-1	6.27

SERIES 61 (DC) PC MOUNTABLE SPDT RELAYS

Series 61 Relays, rated 3 and 10 A, are epoxy sealed and immersion proof, withstanding most flux cleaning solvents. Relay is compact—only .5 cubic in. **Operating Temperature:** -30°C to +60°C. **Initial Breakdown Voltage:** 500 Vrms (between open contacts), 1500 Vrms (between all other elements).

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage (VDC)	Typ. Res. (Ohms)	Nom. Power (mW)	Arrang.	Max. Curr. @ 28 VDC 120 VAC (Amps)		
RLY6120	5-6	70	360	SPDT	3	R55	\$3.27
RLY6122	12	400	360	SPDT	3	R55	3.27
RLY6123	24	1600	360	SPDT	3	R55	3.27
RLY6190	506	70	360	SPDT	10	R55	3.41
RLY6192	12	400	360	SPDT	10	R55	3.41
RLY6193	24	1600	360	SPDT	10	R55	3.41

SERIES 64 (AC) AND 65 (DC) PC MOUNTABLE SPDT RELAYS

Series 64 and 65 relays are compact (1.1 cubic in.) 5 or 10 A SPDT relays. Relays are epoxy sealed and come with a high impact plastic dust cover. R-Suffix relays have low coil power. **Operating Temperature:** -55°C to +85°C. **Initial Breakdown Voltage:** 500 Vrms (between open contacts), 1500 Vrms (between all other elements).

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage	Typ. Res. Ohms	Nom. Power	Arrang.	Max. Curr. @ 28 VDC 120 VAC (Amps)		
SERIES 64 RATINGS (AC INPUT)							
RLY6422	12 VAC	.....	1 VA	SPDT	10	R56	\$4.94
RLY6423	24 VAC	.....	1 VA	SPDT	10	R56	4.94
RLY6425	120 VAC	.....	1 VA	SPDT	10	R56	5.73

SERIES 65 RATINGS (DC INPUT)

RLY6520	5-6 VDC	75	500 mW	SPDT	10	R56	\$4.43
RLY6520R	5-6 VDC	250	100 mW	SPDT	5	R56	4.78
RLY6522	12 VDC	300	500 mW	SPDT	10	R56	4.76
RLY6522R	12 VDC	1400	100 mW	SPDT	5	R56	4.90
RLY6523	24 VDC	1200	500 mW	SPDT	10	R56	4.91
RLY6523R	24 VDC	5500	100 mW	SPDT	5	R56	5.01

SERIES 67 (DC) PC MOUNTABLE SPDT RELAYS

Series 67 10 A relays are immersion proof and epoxy sealed, withstanding most flux cleaning solvents. Compact size—.5 cubic in. **Operating Temperature:** -55°C to +75°C. **Initial Breakdown Voltage:** 1000 Vrms (between open contacts), 1500 Vrms (between all other elements).

Type No.	Coils			Contacts		Fig. No.	Price Each
	Input Voltage (VDC)	Typ. Res. (Ohms)	Nom. Power (mW)	Arrang.	Max. Curr. @ 28 VDC 120 VAC (Amps)		
RLY6720	5-6	100	360	SPDT	10	R64	\$3.29
RLY6722	12	400	360	SPDT	10	R64	3.38
RLY6723	24	1600	360	SPDT	10	R64	3.67

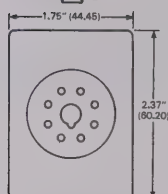
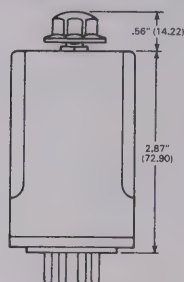


Fig. 50

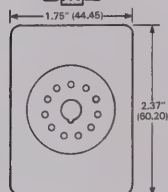
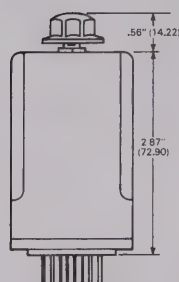
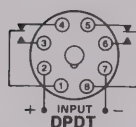
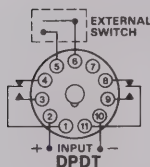


Fig. 51



SERIES 40 (AC) AND 41 (DC) PLUG-IN RELAYS

Series 40 and 41 Adjustable Time Delay On Operate and Adjustable Interval Time Relays feature: $\pm 0.1\%$ repeatability; knob adjustable; transient protection; ICs for timing function; electromechanical relay for switching; trigger protection; high impact dust cover; and octal type plug termination. **Operating Temperature:** -30°C to $+55^{\circ}\text{C}$.

Type No.	Timing Adj. Range (Sec.)	Input		Contacts		Fig. No.	Price Each
		Voltage	Current (mA)	Arrang.	Max. Curr. @ 28 VDC 120 VAC (Amps)		
SERIES 40 RATINGS (AC INPUT), ADJUSTABLE TIME DELAY ON OPERATE							
RLY4045K	.1 to 10	120 VAC	20	DPDT	10	R50	\$40.72
RLY4045L	1 to 180	120 VAC	20	DPDT	10	R50	40.72
RLY4045M	2 to 300	120 VAC	20	DPDT	10	R50	40.72
SERIES 41 RATINGS (DC INPUT), ADJUSTABLE TIME DELAY ON OPERATE							
RLY4143K	.1 to 10	24 VDC	40	DPDT	10	R50	\$40.72
RLY4143L	1 to 180	24 VDC	40	DPDT	10	R50	40.72
SERIES 40 RATINGS (AC INPUT), ADJUSTABLE INTERVAL TIME							
RLY4075K	.1 to 10	120 VAC	20	DPDT	10	R50	\$43.94
RLY4075L	1 to 180	120 VAC	20	DPDT	10	R50	43.94
RLY4075M	2 to 300	120 VAC	20	DPDT	10	R50	43.94
SERIES 41 RATINGS (DC INPUT), ADJUSTABLE INTERVAL TIME							
RLY4173K	.1 to 10	24 VDC	40	DPDT	10	R50	\$44.20
RLY4173L	1 to 180	24 VDC	40	DPDT	10	R50	44.20

ACCESSORIES-SOCKETS

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9113	DIN Rail Mount, Screw Terminals	8-Pin Octal	All	\$4.06
RLY9101	Surface Mount, Screw Terminals	8-Pin Octal	All	4.51
RLY9118	Panel Mount, Solder Terminals	8-Pin Octal	All	1.25

SERIES 42 (AC) AND 43 (DC) PLUG-IN RELAYS

Series 42 and 43 Adjustable Time Delay on Release Relays feature: $\pm 0.1\%$ repeatability; transient protection; knob adjustable; ICs for timing function; electromechanical relay for switching; trigger protection; high impact plastic dust cover; and octal type plug termination. An external switch controls time delay. **Operating Temperature:** -30°C to $+55^{\circ}\text{C}$.

Type No.	Timing Adj. Range (Sec.)	Input		Contacts		Fig. No.	Price Each
		Voltage	Current (mA)	Arrang.	Max. Curr. @ 28 VDC 120 VAC (Amps)		
SERIES 42 RATINGS (AC INPUT)							
RLY4245K	.1 to 10	120 VAC	20	DPDT	10	R51	\$44.20
RLY4245L	1 to 180	120 VAC	20	DPDT	10	R51	44.20
RLY4245M	2 to 300	120 VAC	20	DPDT	10	R51	44.20
SERIES 43 RATINGS (DC INPUT)							
RLY4343K	.1 to 10	24 VDC	40	DPDT	10	R51	\$44.26
RLY4343L	1 to 180	24 VDC	40	DPDT	10	R51	44.26

ACCESSORIES-SOCKETS

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9114	DIN Rail Mount, Screw Terminals	11-Pin Octal	All	\$5.88
RLY9104	Surface Mount, Screw Terminals	11-Pin Octal	All	7.92
RLY9119	Panel Mount, Solder Terminals	11-Pin Octal	All	1.49

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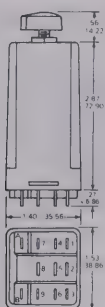
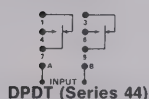
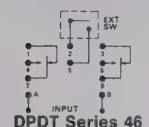


Fig. R52



DPDT (Series 44)



DPDT Series 46

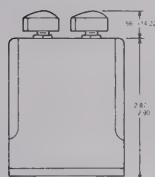
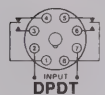


Fig. R53



DPDT

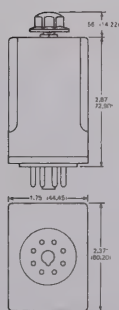
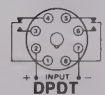


Fig. R50



DPDT

SERIES 44 (AC) AND 46 (AC) TIME DELAY RELAYS

Series 44 Adjustable Time Delay on Operate Relays and Series 46 Adjustable Time Delay on Release Relays share these features: knob adjustable; $\pm 0.1\%$ repeatability; .187" quick connect terminals; socketability and solderability; ICs for timing function; electromechanical relay for switching; transient protection; and plastic dust cover. Series 44 features power on delay, while series 46 features time delay controlled by external switch. **Operating Temperature:** -30°C to $+55^{\circ}\text{C}$.

Type No.	Timing Adj. Range (Sec.)	Input		Contacts		Fig. No.	Price Each
		Voltage (VAC)	Current (mA)	Arrang.	Max. Curr. @ 28 VDC 120 VAC (Amps)		
SERIES 44 RATINGS (AC INPUT)							
RLY4445K	.1 to 10	120	20	DPDT	12	R52	\$48.00
RLY4445L	1 to 180	120	20	DPDT	12	R52	48.00
SERIES 46 RATINGS (AC INPUT)							
RLY4645K	.1 to 10	120	20	DPDT	12	R52	\$49.50
RLY4645L	1 to 180	120	20	DPDT	12	R52	49.50

ACCESSORIES-SOCKETS

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9115	DIN Rail Mount, Screw Terminals	11-Pin Blade	All	\$6.60
RLY9105	Surface Mount, Screw Terminals	11-Pin Blade	All	8.68
RLY9116	Panel Mount, Solder Terminals	11-Pin Blade	All	1.44
RLY9124	Panel Mount, Solder Terminals	11-Pin Blade	All	2.84
RLY9123	PC Mount, Solder Terminals	11-Pin Blade	All	1.84

SERIES 48 (AC) TIME DELAY PLUG-IN RELAYS

Series 48 Adjustable Time Repeat Cycle Timer Relays include these features: knob adjustable; $\pm 0.1\%$ repeatability; transient protection; ICs for timing function; electromechanical relay for switching; trigger protection; high impact plastic cover, and octal type plug termination. **Operating Temperature:** -30°C to $+55^{\circ}\text{C}$.

Type No.	On/Off Timing Adj. Range (Sec.)	Input		Contacts		Fig. No.	Price Each
		Voltage (VAC)	Current (mA)	Arrang.	Max. Curr. @ 28 VDC 120 VAC (Amps)		
RLY4845K	.1 to 10	120	25	DPDT	10	R53	\$52.39
RLY4845L	1 to 180	120	25	DPDT	10	R53	52.39

SERIES 49 (AC/DC) TIME DELAY, PLUG-IN RELAYS

Series 49 Programmable Time Delay on Operate Relays include these features: power on delay; AC or DC operation; 16 programmable timing ranges; knob adjustable; $\pm 0.5\%$ repeatability; CMOS digital timing function; transient protection; electromechanical relay for switching; high impact plastic dust cover, and octal type plug termination. **Operating Temperature:** 0°C to 60°C .

Type No.	Timing Adj. Range	Input		Contacts		Fig. No.	Price Each
		Voltage (VAC/DC)	Current (mA)	Arrang.	Max. Curr. @ 28 VDC 120 VAC (Amps)		
RLY4942	.01 Sec.	12	90	DPDT	10	R50	\$49.95
RLY4943	to	24	45	DPDT	10	R50	49.95
RLY4945	120 Min.	120	20	DPDT	10	R50	49.95

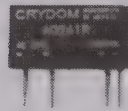
ACCESSORIES-SOCKETS

Socket Type No.	Style	Description	Relay Contact Arrang.	Price Each
RLY9113	DIN Rail Mount, Screw Terminals	8-Pin Octal	All	\$4.06
RLY9101	Surface Mount, Screw Terminals	8-Pin Octal	All	4.51
RLY9118	Panel Mount, Solder Terminals	8-Pin Octal	All	1.25

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PCB MOUNT SOLID STATE RELAYS

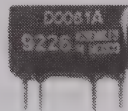
SERIES AO241



Models are 1.0A/1.5A rated SPST-NO miniature SIP solid state relays. All models are available in zero-cross and random turn-on ("R") versions. With an SCR AC switch on the output, the ASO241/R although designed for switching highly inductive, low current loads such as solenoids is also suitable for all loads up to .15A. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 2500 Vrms. **Approvals:** UL File No. E116950 (AO only); CSA File No. LR81689 (AO only).

Mfr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
AO241-P	24-280	.02-1.0	4-10	4.0	1.0	40	\$ 9.83
AO241R-P	24-280	.02-1.0	4-10	4.0	1.0	40	9.83
ASO241-P	12-280	.01-1.5	4-10	4.0	1.0	10	10.89
ASO241R-P	12-280	.01-1.5	4-10	4.0	1.0	10	10.89

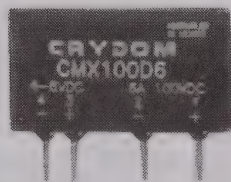
SERIES DO061



SPST-NO DC output relays in epoxy-coated packages utilize the .10" grid lead spacing. Available with either bipolar transistor output (DO), or the DMO Series with MOSFET output rated at 3A/100 VDC, or 5A/60 VDC. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms (DO Models); 250 Vrms (DMO Models).

Mfr. No.	Line Voltage Range (VDC)	Load Current Range (Adc)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1 Sec. (Apk)	Price Each
DO061A-P	3-60	.02-1.0	3-9	3.0	1.0	5.0	\$11.06
DO061B-P	3-60	.02-1.0	1.7-9	1.7	0.8	5.0	11.06
DMO065-P	0-60	0-5.0	3-10	3.0	1.0	20	31.00

SERIES CMX

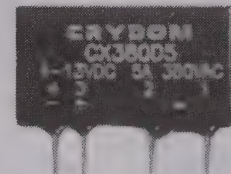


DC output SPST-NO solid state relays use MOSFET output for high switching capabilities in a PC-mount air-cooled package. Pinouts are compatible with Series 6 and ODC type I/O modules. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 2500 Vrms.

Mfr. No.	Line Voltage Range (VDC)	Load Current Range (Adc)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 10 ms (Apk)	Price Each
CMX100D6-P	0-100	0-6	3-10	3.0	1.0	100	\$36.24
CMX60D10-P	0-60	0-10	3-10	3.0	1.0	100	36.24

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SERIES CX



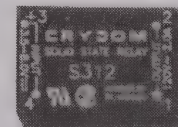
SPST-NO relays achieve the highest power switching capability in a PC-mounted air-cooled package. Advanced features include steady state current, plus ultra-high surge ratings. Models are available to switch up to 660 Vrms with AC or DC control, and either zero-cross or random turn-on ("R") switching versions. Pinout is compatible with Series 6 and OAC type I/O modules. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms. **Approvals:** UL File No. E116949 (DC input only); CSA File No. LR81689 (DC input only); VDE File No. 70938 (240 and 380V, DC input only).

Mfr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
DC INPUT MODELS							
CX240D5-P	12-280	.06-5.0	3-15	3.0	1.0	250	\$13.36
CX240D5R-P	12-280	.06-5.0	3-15	3.0	1.0	250	13.36
CXE240D5-P	12-280	.06-5.0	15-32	15.0	1.0	250	13.36
CXE240D5R-P	12-280	.06-5.0	15-32	15.0	1.0	250	13.36
CX380D5-P	48-530	.06-5.0	4-13	4.0	1.0	250	18.69
CX380D5R-P	48-530	.06-5.0	15-32	15.0	1.0	250	18.69
CX480D5-P	48-660	.06-5.0	4-13	4.0	1.0	250	18.69
CXE480D5-P	48-660	.06-5.0	15-32	15.0	1.0	250	18.69

AC INPUT MODELS

CX240A5-P	12-280	.06-5.0	90-140	90.0	10.0	250	\$14.93
CX240A5R-P	12-280	.06-5.0	90-140	90.0	10.0	250	14.93
CXE240A5-P	12-280	.06-5.0	18-36	18.0	2.0	250	14.93
CXE240A5R-P	12-280	.06-5.0	18-36	18.0	2.0	250	14.93

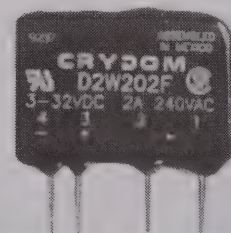
SERIES 3



These solid state relays combine small size and high ratings in a PC-board-mounted SPST-NO design. Available with (S30 types) or without snubber network (S3 types), Series 3 is an ideal replacement for power reed relays in microprocessor or computer-based logic level systems. Designed for long, reliable service in demanding industrial environments. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms. **Approvals:** UL File No. E116949; CSA File No. LR81869.

Mfr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
S322-P	40-280	.01-3.0	3.5-8	3.5	1.0	55	\$32.50
S3022A-P	40-280	.02-3.0	3.5-8	3.5	1.0	55	35.75

SERIES D2W



The D2W Series features an epoxy-coated package for exceptional environmental protection. Pinouts are compatible with Series 6 and OAC type I/O modules. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms. **Approvals:** UL File No. E116950; CSA File No. LR81869.

Mfr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
D2W202F-P	24-280	.06-2.0	3-32	3.0	1.0	28	\$10.59
D2W203F-P	24-280	.06-3.0	3-32	3.0	1.0	70	11.26
D2W203F11-P	24-280	.06-3.5	3-32	3.0	1.0	80	11.96

PANEL MOUNT SOLID STATE RELAYS SERIES I



Featuring state-of-the-art Surface Mount Technology, these SPST-NO relays deliver proven reliability in the most demanding applications. Output consists of an SCR AC switch and is available in zero-cross, random turn-on (phase controllable) and normally closed (Form B) versions with either AC or DC input (coil) control. **Oper. Temp. Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms. **Minimum off state dv/dt:** 500V/μsec. **Approvals:** UL File No. E116949; CSA File No. LR81689; VDE File No. 58729 (does not apply to -B and 40).

Mr. No.*	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
DC Control Models - SCR Output							
D1202-P	24-140	.04-2.5	3-32	3.0	1.0	25	\$25.36
D1210-P	24-140	.04-10	3-32	3.0	1.0	120	37.37
D1225-P	24-140	.04-25	3-32	3.0	1.0	250	37.96
D1240-P	24-140	.04-40	3-32	3.0	1.0		47.24
D2410-P	48-280	.04-10	3-32	3.0	1.0	120	42.38
D2425-P	48-280	.04-25	3-32	3.0	1.0	250	42.89
D2440-P	48-280	.04-40	3-32	3.0	1.0		48.43
D2450-P	48-280	.04-50	3-32	3.0	1.0	625	48.65
D2475-P	48-280	.04-75	3-32	3.0	1.0	1000	79.82
D2490-P	48-280	.04-90	3-32	3.0	1.0	1200	87.79

AC Control Models - SCR Output							
A1202-P	24-140	.04-2.5	90-280	90.0	10.0	25	\$31.54
A1210-P	24-140	.04-10	90-280	90.0	10.0	120	46.96
A1225-P	24-140	.04-25	90-280	90.0	10.0	250	46.21
A1240-P	24-140	.04-40	90-280	90.0	10.0	625	50.05
A2402-P	48-280	.04-2.5	90-280	90.0	10.0	25	32.57
A2410-P	48-280	.04-10	90-280	90.0	10.0	120	45.18
A2425-P	48-280	.04-25	90-280	90.0	10.0	250	46.00
A2425E-P	48-280	.04-25	90-280	90.0	10.0	250	46.00
A2440-P	48-280	.04-40	90-280	90.0	10.0		49.75
A2450-P	48-280	.04-50	90-280	90.0	10.0	625	52.18
A2450E-P	48-280	.04-50	90-280	90.0	10.0	625	52.18
A2475-P	48-280	.04-75	90-280	90.0	10.0	1000	83.96
A2490-P	48-280	.04-90	90-280	90.0	10.0	1200	92.06
A2490E-P	48-280	.04-90	90-280	90.0	10.0	1200	92.06

*Available options: -10 Non-zero cross, phase controllable 10-90 Amp models only. Example: **D2450-10.B** Normally closed (Form B) 10-90 Amp models only, DC control models only. Example: **D2450-B.4D** 400 Hz operation 2.5-50 Amp models only, zero cross switching only. Example: **4D2450.E** 24 VAC input (18-36 VAC). Example: **A2450E**.

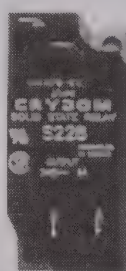
PANEL MOUNT SOLID STATE RELAYS SERIES H12



High voltage relays use IC driven circuits for switching loads up to 660 VAC. All models come with 1200 Volts blocking standard and are available with either AC or DC input (coil) control. Types CA and WD are Snubberless. **Isolation Voltage:** 4000 Vrms. **Minimum Off-State dv/dt:** 500V/μsec. **Approvals:** UL File No. E116949; CSA File No. LR81689.

Mr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
DC Control Models - SCR Output							
H12D4850-P	48-530	.04-50	4-32	4.0	1.0	625	\$ 81.22
H12D4890-P	48-530	.04-90	4-32	4.0	1.0	1200	114.10
AC Control Models - SCR Output							
H12CA4850-P	48-660	.04-50	90-140	90.0	10.0	625	\$ 76.00
H12CA4890-P	48-660	.04-90	90-140	90.0	10.0	1200	101.20

PANEL MOUNT SOLID STATE RELAYS SERIES 2



Relays combine small size and high ratings in a package designed for easy heat sink or panel mounting. Standard .187 push-on terminals assure quick connection and are arranged to provide maximum isolation between signal and power circuits. Model S228C is a snubberless design for applications that require low off-state leakage. **Oper. Temp. Range:** -30°C to 80°C. **Isolation Voltage:** 2500 Vrms. **Approvals:** UL File No. E116949; CSA File No. LR81689.

Mr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
S218-P	20-140	.02-8.0	3.5-8	3.5	1.0	120	\$41.49
S228-P	40-280	.02-8.0	3.5-8	3.5	1.0	120	43.71

PANEL MOUNT SOLID STATE RELAYS SERIES HA AND HD



HA (AC control) and HD (DC control) relays incorporate the same proven technologies as our Series 1. Models HD and HA come with 1200 V blocking as standard; models D and A come with 800V blocking as standard. Both are available in either zero-cross or random turn-on (phase controllable) versions. **Oper. Temp. Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms. **Minimum Off - State dv/dt:** 500V/μsec. **Approvals:** UL File No. E116949; CSA File No. LR81689; VDE File No. 10104.

Mr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
DC Control Models - SCR Output							
HD4812-P	80-530	.04-12	3-32	3.0	1.0	140	\$ 51.90
HD4825-P	80-350	.04-25	3-32	3.0	1.0	250	55.06
HD4850-P	80-330	.04-50	3-32	3.0	1.0	625	61.18
HD4875-P	80-530	.04-75	3-32	3.0	1.0	1000	97.51
HD4890-P	80-530	.04-90	3-32	3.0	1.0	1200	98.91

AC Control Models - SCR Output							
HA4825-P	80-530	.04-25	90-280	90.0	10.0	250	\$ 63.17
HA4825E-P	80-530	.04-25	90-280	90.0	10.0	250	63.17
HA4850-P	80-530	.04-50	90-280	90.0	10.0	625	72.02
HA4850E-P	80-530	.04-50	90-280	90.0	10.0	625	72.02
HA4875-P	80-530	.04-75	90-280	90.0	10.0	1000	99.28
HA4890-P	80-530	.04-90	90-280	90.0	10.0	1200	104.08
HA4890E-P	80-530	.04-90	90-280	90.0	10.0	1200	104.08

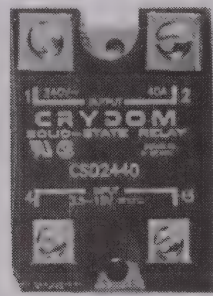
DC Control Models - SCR Output							
D4812-P	80-530	.04-12	3-32	3.0	1.0	140	\$ 49.02
D4825-P	80-350	.04-25	3-32	3.0	1.0	250	53.51
D4850-P	80-330	.04-50	3-32	3.0	1.0	625	54.76
D4875-P	80-530	.04-75	3-32	3.0	1.0	1000	85.29

AC Control Models - SCR Output							
A4825-P	80-530	.04-25	90-280	90.0	10.0	250	\$ 61.18
A4850-P	80-530	.04-50	90-280	90.0	10.0	625	68.33
A4875-P	80-530	.04-75	90-280	90.0	10.0	1000	93.32

*Available options: -10 Non-zero cross, phase controllable. Example: **HD4850-10.E** 24 VAC Input (18-36 VAC). Example: **HA4850E**.

PANEL MOUNT SOLID STATE RELAYS

SERIES CS AND CT



Available with an SCR AC switch output (Series CS) or triac output (CT), all models feature low off-state leakage (snubberless), zero-voltage switching and have a broadened operating range (24-280 VAC). This wide range permits optimum performance at both 120 VAC and 240 VAC line voltages. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms. **Minimum Off-State dv/dt:** 200V/μsec. **Approvals:** UL File No. E116949; CSA File No. LR81689.

Mfr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
CSD2410-P	24-280	.1-10	3.5-15	3.5	1.0	120	\$32.22
CSD2425-P	24-280	.1-25	3.5-15	3.5	1.0	250	41.06
CSD2440-P	24-280	.1-40	3.5-15	3.5	1.0	.....	45.63
CSD2450-P	24-280	.1-50	3.5-15	3.5	1.0	500	47.17
CSD2475-P	24-280	.1-75	3.5-15	3.5	1.0	1000	71.54
CSD2490-P	24-280	.1-90	3.5-15	3.5	1.0	1200	78.85
CSE2410-P	24-280	.1-10	15-32	15.0	1.0	120	32.22
CSE2425-P	24-280	.1-25	15-32	15.0	1.0	250	41.06
CSE2450-P	24-280	.1-50	15-32	15.0	1.0	500	47.17
CSE2475-P	24-280	.1-75	15-32	15.0	1.0	1000	71.54
CSE2490-P	24-280	.1-90	15-32	15.0	1.0	1200	78.85
CTD2410-P	24-280	.1-10	3.5-15	3.5	1.0	120	27.87
CTD2425-P	24-280	.1-25	3.5-15	3.5	1.0	225	28.97

SERIES EZ



The Series EZ SPST-NO AC output relays offer a low profile package with the convenience of quick connect terminals. 4000 Vrms optoisolation and low off-state leakage are standard. The Series EZ is the preferred choice for replacement of 120V and 240V Electro-mechanical relays. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms.

Mfr. No.*	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
DC CONTROL MODELS—SCR OUTPUT							
EZ240D12-P	24-280	.06-12	3-15	3.0	1.0	150	\$22.14
EZ240D12R-P	24-280	.06-12	3-15	3.0	1.0	.....	25.72
EZ240D12RS-P	24-280	.06-12	3-15	3.0	1.0	.....	26.74
EZ240D18-P	24-280	.06-18	3-15	3.0	1.0	200	28.47
EZ240D18R-P	24-280	.06-18	3-15	3.0	1.0	.....	32.05
AC CONTROL MODELS—SCR OUTPUT							
EZ240A12-P	24-280	.06-12	90-140	90.0	10.0	150	\$25.72
EZ240A18-P	24-280	.06-18	90-140	90.0	10.0	200	32.05
EZE240A12-P	24-280	.06-12	18-36	18.0	2.0	150	25.72
EZE240A18-P	24-280	.06-18	18-36	18.0	2.0	200	32.05

*Available options: -S Internal snubber. Example: EZ240D12S. -R Random turn-on switching. Examples: EZ240D12R, EZ240D12RS. -B Normally closed. Example: EZ240D12-B.

SERIES T

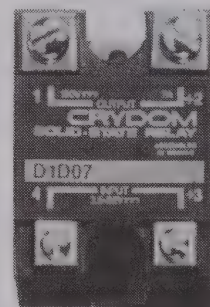


The high reliability of surface mount assembled circuitry combines with cost-effective triac output. Snubbers are included for high DV/DT applications and inductive loads, together with zero-voltage switching to reduce inrush currents and electrical noise. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms. **Approvals:** UL File No. E116949; CSA File No. LR81869; VDE File No. 58731.

Mfr. No.*	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
DC INPUT MODEL							
TD1210-P	24-140	.05-10	3-32	3.0	1.0	100	\$22.70
TD2410-P	48-280	.05-10	3-32	3.0	1.0	100	27.08
TD2425-P	48-280	.05-25	3-32	3.0	1.0	250	28.04
AC INPUT MODELS							
TA1225-P	24-140	.05-25	90-280	90.0	10.0	250	\$31.10
TA2410-P	48-280	.05-10	90-280	90.0	10.0	100	28.63
TA2425-P	48-280	.05-25	90-280	90.0	10.0	250	34.22

*Available options: -F .250 Faston terminals instead of screw terminals Example: TD2425F. -B Normally closed (Form B) DC control models only Example: TD2425-B. -E 24 VAC input (18-36 VAC) Example: TA2425E.

SERIES 1-DC



DC output relays feature MOSFET technology for low on-state resistance, assuring easy paralleling and switching capabilities to 40 amps at 100 VDC. Lower current models are also available to 500 VDC. All models come in standard panel-mount package. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 2500 Vrms. **Approvals:** UL File No. E116950 (100V models).

Mfr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
D1D07-P	0-100	0-7	3.5-32	3.5	1.0	15	\$ 61.61
D1D12-P	0-100	0-12	3.5-32	3.5	1.0	28	68.11
D1D20-P	0-100	0-20	3.5-32	3.5	1.0	42	74.01
D1D40-P	0-100	0-40	3.5-32	3.5	1.0	106	92.73
D2D07-P	0-200	0-7	3.5-32	3.5	1.0	22	71.20
D2D12-P	0-200	0-12	3.5-32	3.5	1.0	27	82.11
D4D07-P	0-400	0-7	3.5-32	3.5	1.0	17	82.11
D4D12-P	0-500	0-12	3.5-32	3.5	1.0	36	112.69
D5D07-P	0-500	0-8	3.5-32	3.5	1.0	19	92.43
D5D10-P	0-500	0-10	3.5-32	3.5	1.0	29	121.91

PANEL MOUNT SOLID STATE RELAYS

SERIES DC60



Bipolar transistor outputs are available in 3, 5 and 7 amp ratings. Cost-effective relays offer 4000 Volt isolation and come in standard panel-mount package. **Oper. Temp. Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms

Mfr. No.	Line Voltage Range (VDC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1 sec. (Apk)	Price Each
DC60S3-P	3-60	.02-3	3-32	3.0	1.0	6	\$16.58
DC60S5-P	3-60	.02-5	3-32	3.0	1.0	10	25.96
DC60S7-P	3-60	.02-7	3-32	3.0	1.0	14	32.45

DUAL RELAYS

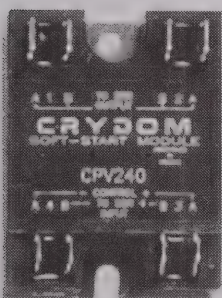


Two (Dual) totally independent AC output relays come in a single standard panel-mount package. Utilizing an AC switch output with internal snubber, relays provide greater protection against false triggering. Model choices include zero-voltage or random turn-on (phase controllable) switching. **Oper. Temp. Range:** -30°C to 80°C. **Isolation Voltage:** 2500 Vrms. **Approvals:** UL File No. E116949; CSA File No. LR5625M9.

Mfr. No.*	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
D2425D-P	24-280	.05-25	4-15	4.0	1.0	250	\$77.24
D2440D-P	24-280	.05-40	4-15	4.0	1.0	625	87.12

*Available options: -10 Random turn-on, phase controllable. Example: D2440D-10, TD2420Q-10.

SERIES CPV



Models CPV120 and CPV240 auxiliary function modules provide control of the phased turn-on of a solid state relay, in response to the application of a 0-5 VDC control signal. They must be used with Crydom Series 1 random turn-on solid state relays. Consult factory about use with 480 VAC loads. For a complete set (control module and solid state relay) order 10CPV120, 25CPV120, etc. **Oper. Temp. Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms.

Mfr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Signal Range (VDC)	Logic Supply Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
CPV120-P*	90-140	*	0-5	3.5-10	*	\$40.46
CPV240-P*	180-280	*	0-5	3.5-10	*	40.46

*Control module only; must be used with -10 (Series 1) DC input relay.

SERIES 53TP



Three-phase solid state relays switch up to 530 Vrms directly to loads such as motors, transformers, heating elements, etc. Models are available with either AC or DC input (coil) control in zero-voltage or random turn-on switching versions. **Oper. Temp. Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms.

Mfr. No.*	Line Voltage Range (VDC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
DC Input Models							
D53TP50D-P	48-530	.05-50	3-32	3.0	1.0	625	\$178.07

AC Input Models							
A53TP50D-P	48-530	.05-50	90-280	90.0	10.0	625	\$185.16

*Available options: -10 Non-zero cross, instantaneous turn-on. Example: D53TP50D-10. DP 2 controlled, 1 linked example: D53DP50D.

SERIES DSD AND DSL

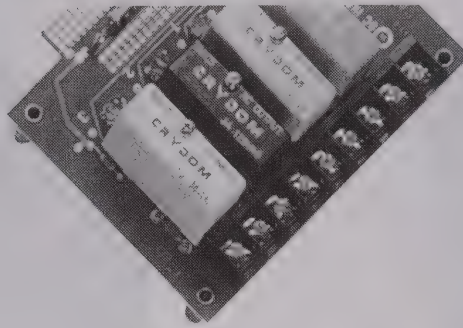


These "on-operate" (pull-in) time-delay solid state relays are housed in a single industry standard package. AC output is controlled by a DC input and has an externally adjustable time delays. Choices include models with two time-delay ranges. **Oper. Temp. Range:** -30°C to 80°C. **Isolation Voltage:** 4000 Vrms.

Mfr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
DSD2410-P	48-280	.04-10	3.5-15	3.5	1.0	120	\$53.96
DSD2425-P	48-280	.04-25	3.5-15	3.5	1.0	250	55.72
DSD2450-P	48-280	.04-50	3.5-15	3.5	1.0	625	58.67
DL2410-P	48-280	.04-10	3.5-15	3.5	1.0	120	53.96
DL2425-P	48-280	.04-25	3.5-15	3.5	1.0	250	56.83

WE ARE BETTER ABLE TO SERVICE YOUR NEEDS BY BELONGING TO EDPA, A NATIONAL BUYING GROUP.

I/O MODULES

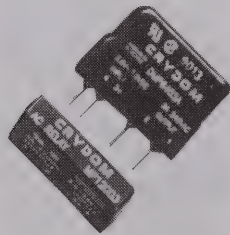


SERIES IAC/IDC AND OAC/ODC

Solid state I/O switching modules deliver an electrically clean, photo-isolated, noise-free "output" interface from logic level control systems to external loads such as motors, valves, solenoids, etc. — or an "input" interface from the load or sensors to microprocessor or computer-based logic level systems. Designed for long, reliable service in demanding industrial environments. UL recognized; CSA certified.

Model Number	IAC5-P	IDC5-P	OAC5-P	OAC5A-P	ODC5-P
SYSTEM VOLTAGES 5 VDC					
Voltage Type Color Code	AC or DC Input Yellow	DC Input White	AC Output Black	AC Output Black	DC Output Red
INPUT SPECIFICATIONS					
Voltage Range	90-140 VAC	10-36 VDC	3-6 VDC	3-6 VDC	3-6 VDC
Typical Current @ Rated Voltage	7 mA	8 mA	19 mA	19 mA	14 mA
Typical Current @ Maximum Voltage	8 mA	10 mA	22 mA	22 mA	18 mA
OUTPUT SPECIFICATIONS					
Load Current Over Load Voltage Range	.1-100 mA @	.1-100 mA @	.02-3A @	.02-3A @	.02-3A @
	.4-30 VDC	.4-30 VDC	12-140 VAC	24-280 VAC	5-60 VDC
Maximum Turn-on Time	20 ms	5 ms	½ Cycle	½ Cycle	0.3 ms
Maximum Turn-off Time	20 ms	5 ms	½ Cycle	½ Cycle	0.3 ms
Switching Type	Random	Random	Zero	Zero	Random
Price Each	\$10.53	\$10.53	\$10.53	\$10.53	\$10.53

SERIES MP



Available in 3Arms and 4Arms ratings, all are SPST-NO PC-mount relays that provide greater packaging density and compatibility with pinout of Series 6 and OAC output modules. Models include internal snubber for high dv/dt applications, together with zero-voltage switching to reduce high inrush currents and electrical noise. **Operating Temperature Range:** -30°C to 80°C. **Isolation Voltage:** 2500 Vrms. **Approvals:** UL File No. E116950.

Mr. No.	Line Voltage Range (VAC)	Load Current Range (Arms)	Control Voltage Range (VDC)	Must Operate Voltage (VDC)	Must Release Voltage (VDC)	Surge Current 1-Cycle (Apk)	Price Each
MP240D2-P	24-280	.02-3.0	3.5-18	3.5	1.0	80	\$16.14
MP240D4-P	24-280	.02-4.0	3.5-18	3.5	1.0	80	\$23.59

RELAY ACCESSORIES—HEAT SINKS

Mr. No.	Usage Ratings	Price Each
HS1-P	Up to 10A	\$23.07
HS2-P	Up to 25A	\$24.92
HE54-P	Up to 50A	\$36.55

Note: Contact factory for dimensions and thermal information.

SERIES PB MOUNTING BOARD

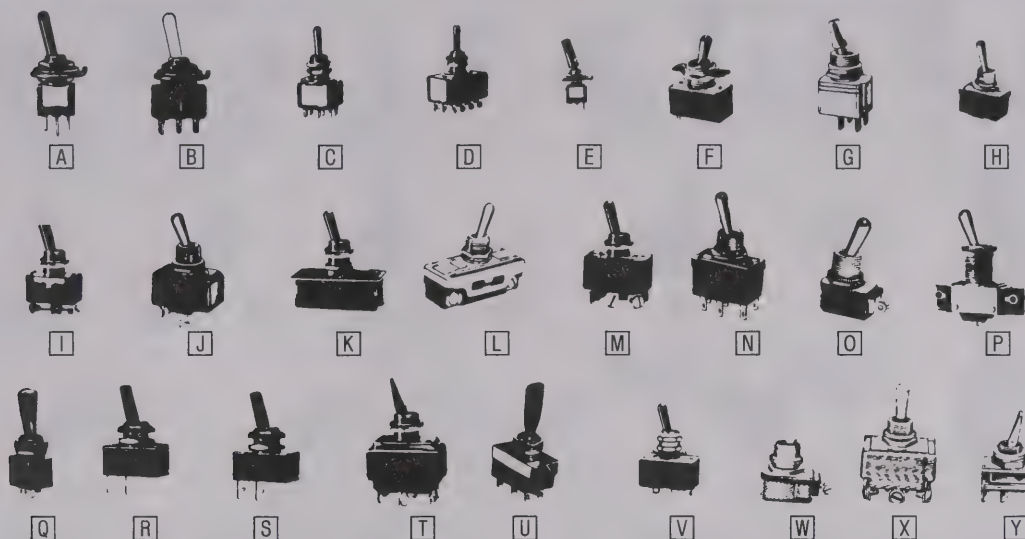
These mounting boards accept I/O modules in any combination of input or output types. Modules are easily and quickly inserted without disturbing field wiring. Features include: LED status indicator, plug-in 5 amp fuse and 3.3K ohm pull-up resistor for each module.

Model Number	PB4-P	PB4R-P
Module Positions	4	4
Input/Output Channels	4	4
Designed to Operate with Negative True Logic Systems and One Logic Voltage	Yes	No
Designed to Operate with Negative or Positive True Logic Systems and Different Logic Voltage	No	Yes
Barrier Strip Screw Terminals for Field Connections	Yes	Yes
Logic Connection Type	Screw Terminal	Screw Terminals
Connector Part Number Code		Note 1,2
5 Amp Fuse: Bussman GFAI, or Littlefuse 275-005, or Littlefuse 255005	Yes	Yes
5 Amp Fuse: Bussman GFAI, or Littlefuse 275-001, or Littlefuse 255001	No	No
UL Recognized CSA Certified*	Yes Yes	Yes Yes
Price Each	\$42.50	\$48.86

*Recognized/Certified for 125V max. with 5 amp fuses; for 250V max. use #22 solid copper jumper wire instead of 5 amp fuses.

Note: 1. 26-Pin Card Edge Connector; T&B Ansley P/N 609-2615M, 3M P/N 3462-001. 2. 50-Pin Card edge Connector; T&B Ansley P/N 609-5015M, 3M P/N 3415-001, Dale P/N EB43K25SGFW (WireWrap or Solder Connector).

TOGGLE SWITCHES



BAT HANDLE

GC No.	Type	Amps @ 125 V	Action	Terminals	Fig.	Mtg. Hole	Price Each
TWO POSITION							
35-000†	SPST	3	On-Off	Solder	A	.203"	\$ 3.79
35-001†	SPDT	3	On-On	Solder	A	.203"	3.99
35-002†	DPDT	3	On-On	Solder	A	.203"	4.49
35-003	SPDT	6	On-(On)	Solder	B	.203"	3.79
35-004	SPDT	6	On-On	Solder	B	.203"	3.29
35-006	SPST	6	On-Off	Solder	B	.203"	3.99
35-010	DPDT	5	On-On	Solder	C	.250"	4.69
35-014	DPDT	5	On-(On)	Solder	C	.250"	4.89
35-024	3PDT	5	On-On	Solder	D	.250"	9.29
35-036	4PDT	5	On-On	Solder	D	.250"	12.09
35-064	SPST	3	On-Off	Solder	F	.500"	2.19
35-076	SPST	3	Off-(On)	Solder	H	.500"	9.19
35-078	SPST	15	On-Off	Solder	I	.500"	5.29
35-080	SPST	15	On-Off	Screw	I	.500"	4.39
35-112	DPST	6	On-Off	Solder	J	.500"	8.29
35-114	SPDT	3	On-Off	Solder	J	.500"	6.09
35-116	SPDT	3	On-(On)	Solder	H	.500"	11.19
35-126	DPST	16	On-Off	Screw	K	.500"	8.49
35-128	DPST	16	On-Off	Screw	L	.500"	7.59
35-130	SPDT	20	On-On	Screw	M	.500"	4.89
35-132	DPDT	3*	On-On	Solder	F	.500"	3.99
35-139	3PST	16	On-Off	Screw	W	.500"	15.29
35-141	3PDT	16	On-On	Screw	W	.500"	17.39
35-144	DPDT	15	On-On	Solder	M	.500"	9.59
35-146	DPDT	15	On-On	Screw	M	.500"	7.89
35-152	DPDT	6	On-On	Solder	J	.500"	7.79
35-154	DPDT	6	Off-(On)	Solder	N	.4678"	16.09
35-160	SPST	3	On-Off	Solder	O	.500"	5.59
35-167	SPST	20	On-Off	Screw	W	.500"	7.29
35-168	DPDT	3	On-On	Solder	P	.500"	15.79
35-1076	SPST	6	Off-(On)	Screw	M	.500"	10.79
35-1116	SPDT	6	On-(On)	Screw	M	.500"	12.09
35-1114	SPDT	6	On-On	Screw	M	.500"	7.59

THREE POSITION

35-005	SPDT	6	On-Off-On	Solder	B	.203"	\$ 3.39
35-007	SPDT	6	On-Off-(On)	Solder	B	.203"	3.89
35-008	SPDT	6	(On)-Off-(On)	Solder	B	.203"	3.99
35-009	DPDT	5	On-Off-On	Solder	C	.250"	6.79
35-012	DPDT	5	On-Off-On	Solder	C	.250"	5.69
35-016	DPDT	5	On-Off-On	Solder	C	.250"	6.99
35-018	DPDT	5	(On)-Off-(On)	Solder	C	.250"	5.99
35-026	3PDT	5	On-Off-On	Solder	D	.250"	9.99
35-038	4PDT	5	On-Off-On	Solder	D	.250"	11.09
35-086	SPDT	6	On-Off-(On)	Solder	J	.500"	8.49
35-100	SPDT	10	(On)-Off-(On)	Solder	V	.4678"	17.49
35-110	SPDT	15	On-Off-On	Screw	I	.500"	6.49
35-140	3PDT	16	On-Off-On	Screw	W	.500"	19.39
35-143	4PDT	10	On-Off-On	Screw	W	.500"	23.99
35-148	DPDT	15	On-Off-On	Screw	M	.500"	7.89
35-149	DPDT	15	On-Off-On	Solder	M	.500"	11.19
35-150	DPDT	15	(On)-Off-(On)	Screw	X	.500"	10.29
35-151	DPDT	20	On-Off-(On)	Screw	M	.500"	11.39
35-153	SPDT	20	On-Off-(On)	Screw	M	.500"	7.19
35-155	SPDT	20	(On)-Off-(On)	Screw	N	.500"	5.99

†Subminiature. *Rating at 250 VAC. () Momentary.

PADDLE HANDLE

GC No.	Type	Amps @ 125 V	Action	Terminals	Fig.	Mtg. Hole	Price Each
TWO POSITION							
35-053	SPDT	6	On-On	PC	E	.250"	\$ 8.29
35-057	DPDT	6	On-On	PC	E	.250"	12.39
35-070	SPDT	3	On-On	Solder/QC	G	.453"	6.79
35-072	DPDT	3	On-On	Solder/QC	G	.453"	9.69
35-090#	SPST	20%	On-Off	Solder/QC	Y	.500"	6.29
35-092#	SPST	20%	On-Off	Solder/QC	Y	.500"	6.29
35-094#	SPST	20%	On-Off	Solder/QC	Y	.500"	6.29
35-136	SPST	6	On-Off	Solder	Q	.500"	5.19
35-138	DPDT	6	On-On	Solder	Q	.500"	8.19
35-178	SPST	3*	On-Off	Solder	R	.500"	4.09
35-180	SPST	10	On-Off	Solder	S	.500"	4.09
35-182	SPDT	10	On-On	Solder	S	.500"	4.89
35-186	DPDT	6	On-On	Solder	T	.500"	8.59

THREE POSITION

35-055	SPDT	6	On-Off-On	PC	E	.250"	\$ 8.59
35-059	DPDT	6	On-Off-On	PC	E	.250"	12.39
35-071	SPDT	3	On-Off-On	Solder/QC	G	.453"	7.89
35-073	DPDT	3	On-Off-On	Solder/QC	G	.453"	10.49
35-184	SPDT	10	On-Off-On	Solder	S	.500"	4.89
35-188	DPDT	6	On-Off-On	Solder	T	.500"	8.59
35-189	DPDT	6	On-Off-On	Solder	U	.500"	10.59

#Illuminated. *Rating at 250 VAC. \$Rating at 12 VAC.

BALL HANDLE

GC No.	Type	Amps @ 125 V	Action	Terminals	Fig.	Mtg. Hole	Price Each
35-170	SPST	6	On-Off	Screw	...	.500"	\$4.69

CIRCUIT BREAKERS

Calibration: Will carry continuously 100% of rating. Will trip between 6-30 seconds at 200% of rated load at 25°C. **Dielectric Strength:** Over 1500 Volts RMS. **Maximum Operating Voltage:** 50V/DC, 250V/AC. **Interrupt Capacity:** 2000 Amps at 50V/DC; 1000 Amps at 250V/AC.

GC Model	Rating (Amps)	Terminals (Quick Connect)	Mounting Hole	Price Each
35-2103	3	.250"	.500"	\$6.79
35-2104	4	.250"	.500"	5.29
35-2105	5	.250"	.500"	5.29
35-2106	6	.250"	.500"	5.29
35-2107	7	.250"	.500"	5.29
35-2108	8	.250"	.500"	5.29
35-2110	10	.250"	.500"	5.29
35-2112	12	.250"	.500"	5.29
35-2115	15	.250"	.500"	5.29
35-2120	20	.250"	.500"	5.29
35-2125	25	.250"	.500"	5.29
35-2130	30	.250"	.500"	5.29



Snap-in and bushing-mounted pushbutton switches for use in a wide variety of applications in keyboards, test and communications equipment, control panels and remote control devices.

GC No.	Type	Amps @ 125 V	Action	Terminals	Fig.	Mtg. Hole	Price Each
35-400†	SPST	0.5*	Off-(On)	Solder	A	.156"	\$ 5.99
35-402†	SPST	0.5*	On-(Off)	Solder	A	.156"	8.99
35-404	SPDT	3	•	Solder	B	.250"	5.19
35-405	DPDT	3	•	Solder	B	.250"	5.99
35-406	SPST	3	•	Solder	C	.312"	5.19
35-408	SPDT	3	•	Solder	C	.312"	4.09
35-409	SPST	3	Off-(On)	Solder	C	.312"	4.29
35-410	SPST	1	Off-(On)	Solder	D	.281"	1.49
35-411	SPST	3	Off-(On)	Solder	E	.312"	3.69
35-412	SPST	3	Off-(On)	Solder	F	.312"	3.69
35-413	SPST	3	Off-(On)	Solder	G	.312"	4.09
35-415	SPST	1	Off-(On)	Solder	H	.500"	2.19
35-416	SPDT	1**	On-(Off)	Solder	I	.468"	5.99
35-420	SPST	3†	Off-(On)	Solder	J	.468"	2.19
35-421	SPST	3†	Off-(On)	Solder	K	.468"	2.79
35-422	SPST	3†	•	Solder	J	.468"	4.29
35-423	SPST	3	Off-(On)	Solder	L	.687"	2.29
35-430	SPST	3	Off-(On)	Solder	M	.500"	14.89
35-432	SPST	3	On-(Off)	Solder	M	.500"	14.89
35-443	SPST	10 mA	Off-(On)	P.C.	N	.500"	2.69

DIP SWITCHES



Dual-in-line switches for PC board mounting. **Current Rating:** 500 mA at 50 VDC, 300 mA at 24 VDC. **Initial Contact Resistance:** 50 milliohms. **Insulation Resistance:** 100 megohms, min., at 100 VDC. **Contact Material:** Copper with gold plate. **Terminal Material:** Copper with gold plate.

GC No.	Type	mA @ 50 VDC	No. of Positions	Action	Terminals	Price Each
35-961	SPST	100	1	On-Off	PC	\$2.49
35-964	SPST	100	4	On-Off	PC	2.59
35-966	SPST	100	6	On-Off	PC	3.29
35-968	SPST	100	8	On-Off	PC	3.49
35-970	SPST	100	10	On-Off	PC	4.09

GC No.	Type	Amps @ 125 V	Action	Terminals	Fig.	Mtg. Hole	Price Each
35-448	SPST	6	•	Solder	O	.500"	\$ 9.19
35-449	SPST	6	On-Off	Screw	P	.500"	9.09
35-450	SPDT	*	Off-(On)	Solder	Q	.250"	7.79
35-451	SPDT	*	Off-(On)	Solder	Q	.250"	11.19
35-455	SPST	16	On-Off	Solder/QC	R	1.02"	9.69
35-457	SPST	16	Off-(On)	Solder/QC	R	1.02"	8.49
35-476	SPST	5†	Off-(On)	Solder/QC	R	.468"	5.29
35-480	SPST	10	•	Solder/QC	S	1.100"	9.69
						× .880"	
35-482	SPST	10	•	Solder/QC	S	1.100"	9.69
						× .880"	
35-490	DPDT	15	•	Solder/PC	T	.562"	27.29
35-491	DPDT	15	•	Solder/PC	U	1.000"	4.09
35-830	SPDT	15	Off-(On)	Q.C.	V	1.000"	6.39

†Subminiature. *Rating at 120 VAC. **Rating at 70 VAC. †Rating at 250 VAC. •Push-on, push-off. § Push-on, push-on.

SLIDE SWITCHES



Slide switches in a variety of sizes and styles, suitable for use in equipment where space is critical, yet performance is essential. Insulation resistance, 100 megohms. Will withstand 1200 V (except illuminated models, 250 V). Contacts are silver-plated bronze (except illuminated models, copper alloy).

GC No.	Type	Amps @ 125 V	Terminals	Mtg. Holes		Price Each
				Dia.	Centers	
TWO POSITION						
35-202	SPDT	0.5 $\frac{1}{8}$	Solder	.080"	.590"	\$1.39
35-204	DPDT	0.5 $\frac{1}{8}$	Solder	.080"	.745"	1.39
35-210	SPST	4	Solder/PC	.....	1.102"	1.89
35-222	DPDT	4	Solder/PC	.....	1.120"	1.39
35-242	DPDT	3	Solder		1.125"	2.39
THREE POSITION						
35-240	DP3T	4	PC		1.420"	\$3.59

§Rating at 250 VAC.

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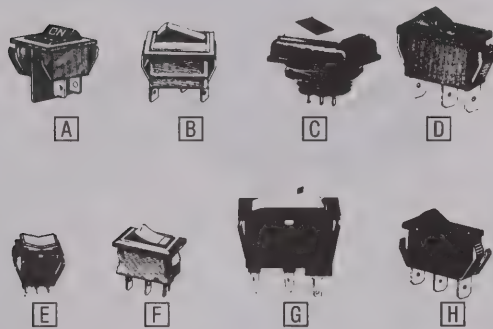
APPLIANCE SWITCHES



GC No.	Type	Amps @ 125 V	Action	Terminals	Price Each
35-850	SPST	6	On-Off, Rotary	Pin§	\$1.49
35-852	SPST	3	Push-On, Push-Off	6" leads*	3.29
35-854	SPST	6	On-Off, Toggle	6" leads*	3.49
35-856	SPST	3	On-Off, Rotary	6" leads*	2.59
35-860	SPST	1	Push-On, Push-Off	Solder#	1.79
35-864	SPST	3	Pull-On, Pull-Off	6" leads	3.79

*18 AWG, 105°C, plastic-insulated copper wire, stripped 1/2" and tinned.
§ Spring brass. #Tin-plated copper alloy.

ROCKER SWITCHES



Snap-in and screw mounted rocker switches designed for industrial applications in control panels, entertainment systems and home appliances. Insulation resistance, 100 megohms.

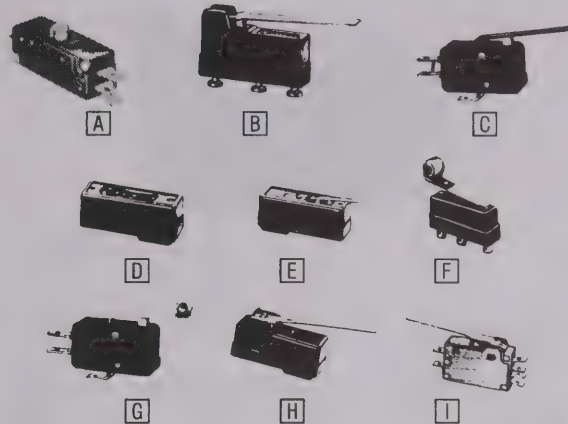
GC No.	Type	Amps @ 125 V	Action	Terminals	Fig.	Price Each
35-602	SPDT	4	On-On	Solder	C	\$6.19
35-603	SPDT	4	On-(On)	Solder	C	7.59
35-691	SPST	16	On-Off	Solder/QC	H	2.69
35-693	SPST	16	On-Off	Solder/QC	H	3.19
35-620	DPST	16	On-Off	Solder/QC	A	5.39
35-621#	SPST	10	On-Off	Solder/QC	B	7.09
35-640	SPDT	10	On-On	Solder/QC	D	3.59
35-660#	SPST	10	On-Off	Solder/QC	D	6.59
35-662#	SPST	10	On-Off	Solder/QC	D	6.59
35-664#	SPST	10	On-Off	Solder/QC	D	6.59
35-674†	DPDT	8	On-On	Solder	E	6.19
35-680#	SPST	5	On-Off	Solder/QC	F	4.89
35-681#	SPST	5	On-Off	Solder/QC	F	4.89
35-682#	SPST	5	On-Off	Solder/QC	F	5.29
35-684#	SPST	10	On-Off	Solder	G	6.69
35-688#	SPST	10	On-Off	Solder/QC	D	5.39

THREE POSITION

35-676	DPDT	8	On-Off-On	Solder	E	\$7.99
35-695	SPDT	10	On-Off-On	Solder/QC	D	6.29
35-604	SPDT	4	On-Off-On	Solder	C	6.69
35-694	SPDT	16	On-Off-On	Solder/QC	H	3.49

#Illuminated. †Miniature.

PRECISION SWITCHES



GC No.	Type	Amps @ 125V	Actuator	Terminals	Fig.	Price Each
35-461	SPDT	15	Plunger	Solder/QC	A	\$ 2.69
35-462	SPDT	15	Plunger	Solder/QC	A	6.69
35-463	SPDT	15	Roller	Solder/QC	A	5.29
35-464	SPDT	15	Lever	Solder/QC	A	3.19
35-822	SPDT	5	Leaf	Turret	B	6.49
35-824	SPDT	10	Lever	Q.C.	C	3.79
35-828	SPDT	20	Lever	Solder	E	7.29
35-834	SPDT	5	Plunger	Solder	F	5.59
35-836	SPDT	5	Lever	Solder	F	8.19
35-838	SPDT	5	Roller	Solder	F	8.49
35-840	SPDT	15	Plunger	Solder	G	3.29
35-842	SPDT	15	Lever	Solder	G	4.19
35-844	SPDT	15	Lever	Solder	G	3.59
35-846	SPDT	15	Plunger	Solder	G	4.29
35-848	SPDT	15	Roller	Solder	G	4.09
35-980	SPDT	10	Pin	Screw lug	H	12.39
35-982	SPDT	10	Plunger	Screw lug	H	21.49
35-984	SPDT	10	Lever	Screw lug	H	14.39
35-990	SPDT	15	Plunger	Solder/QC	I	6.89
35-992	DPDT	15	Lever	Solder/QC	I	7.69

ROTARY SWITCHES



Initial Contact Resistance: 10 milliohms at 2-4 VDC, 1 A. **Insulation Resistance:** 1000 megohms. **Withstanding Voltage:** 1000 V rms at sea level. **Contact Material:** Silver-plated phosphor bronze. **Terminal Material:** Silver-plated phosphor bronze. **Shaft:** 1/4" metal.

GC No.	Positions	Poles	Type	Price Each
35-375	6	2	Shorting	\$5.39
35-376	12	1	Shorting	5.39
35-377	5	2	Non-shorting	5.39
35-378	3	3	Non-shorting	5.39
35-379	4	3	Shorting	4.99
35-380	3	4	Shorting	4.99

KNIFE SWITCH



Current Rating: 3 A at 200 VAC/DC. **Contact Material:** Nickel-plated steel. **Terminal Material:** Nickel-plated steel. **Terminal Type:** Screw.

GC No.	Type	Action	Actuator	Price Each
35-730	DPDT	On-Off-On	Plastic Handle	\$2.49

MERCURY TILT SWITCH

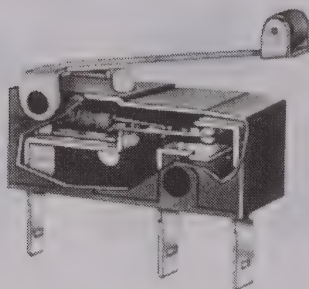


Current Rating: 1 A at 250 VAC. **Contact Material:** Iron alloy/mercury. **Terminal Material:** Copper wire (5/32" flexible leads).

GC No.	Type	Action	Tilt Angle	Actuator	Price Each
35-760	SPST	NO or NC*	12°	Mercury	\$6.49

*Depending on orientation.

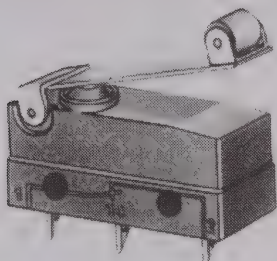
DA3 SERIES SUBMINIATURE AUTOMATED



Ratings: 0.1 amps 125 VAC Gold crosspoint contacts **UL Recognized and CSA Certified.**

Part No.	"E" Series Equivalent	Terminal	Circuitry	Operating Force (Max. gms.)	Price Each
DA3C-B1AA	E63-30A	.110 QC	SPDT	90	\$4.55
DA3C-D1AA	E63-10A	SS	SPDT	90	4.55
DA3C-F1AA	E63-00A	.093 QC	SPDT	90	4.55

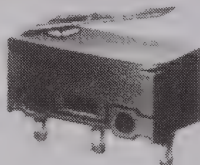
DC SERIES INTERNATIONAL SUBMINIATURE WATERPROOF



Series Ratings
DC1 5 amps 125/250 VAC
DC3 0.1 amp 125 VAC
UL and CSA Pending.

Part No.	Terminal	Circuitry	Operating Force (Max. gms.)	Price Each
DC1C-A1AA	SS	SPDT	203	\$3.42
DC3C-A1AA	SS	SPDT	203	5.14

DG SERIES SUB-SUBMINIATURE



Ratings
 3 amps 125 VAC
 2 amps 30 VDC
UL Recognized and CSA Certified.

Part No.	Circuitry	Operating Force (Max. gms.)	Price Each
DG1C-B1AA	SPDT	140	\$3.02
DG2C-B1AA	SPDT	140	3.26

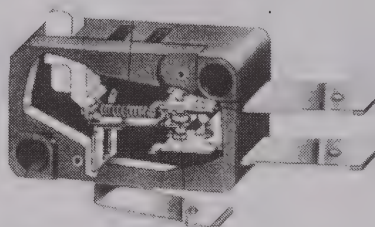
DH SERIES ULTRA-SUBMINIATURE



Series Ratings
DH1C 50-500 mA resistive (a 30 VDC Silver plated contacts
DH2C 5-50 mA resistive (a 30 VDC Gold plated contacts

Part No.	Circuitry	Operating Force (Max. gms.)	Price Each
DH1C-B1AA	SPDT	90	\$4.17
DH1C-B1PA	SPDT	50	4.29
DH2C-B1AA	SPDT	90	4.40
DH2C-B1PA	SPDT	50	4.52

D4 SERIES MINIATURE INTERNATIONAL



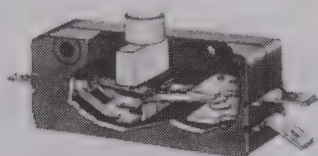
Series Ratings
D41 0.1 amps 125 VAC Gold crosspoint contacts
D42 3 amps 125/250 VAC
D43 5 amps—1/4 HP, 125/250 VAC
D44 10 amps—1/2 HP, 125/250 VAC
D45 15 amps—1/2 HP, 125/250 VAC
UL Recognized and CSA Certified.

Part No.	"E" Series Equivalent	Terminal	Circuitry	Operating Force (Max. gms.)	Price Each
D41C-R1AA	E21-00A	QC	SPDT	75	\$3.71
D41L-R1AA	E21-00AX	QC	SPDT	15	3.98
D41L-R1XL	E21-85HX	QC	SPDT	2	4.31
D42C-R1AA	E22-00A	QC	SPDT	75	2.16
D42L-R1AA	E22-00AX	QC	SPDT	15	2.52
D42L-R1XL	E22-85HX	QC	SPDT	2	2.85
D43C-R1AA	E23-00A	QC	SPDT	170	2.13
D43L-R1AA	E23-00AX	QC	SPDT	45	2.49
D43L-R1ML	E23-85HX	QC	SPDT	6	2.82
D44C-R1RA	E33-00K	QC	SPDT	285	2.84
D44L-R1AA	E22-00AX	QC	SPDT	75	2.49
D44L-R1ML	E33-85HX	QC	SPDT	10	2.82
D45C-R1AA	E34-00A	QC	SPDT	400	2.13

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E SERIES

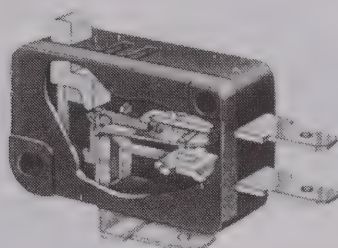
GENERAL PURPOSE SINGLE POLE



Ratings
15 amps 125/250 VAC
¼ HP, 125 VAC—1½ HP, 250 VAC
UL Recognized and CSA Certified.

Part No.	Fig.	Terminal	Circuitry	Operating Force (Max. gms.)	Price Each
E13-00E	A	QC	SPDT	425	\$2.36
E13-00H	B	QC	SPDT	100	3.20
E13-00J	C	QC	SPDT	425	2.61
E13-00K	D	QC	SPDT	100	3.90
E13-00M	E	QC	SPDT	425	3.32
E13-50H	G	QC	SPDT	65	3.20

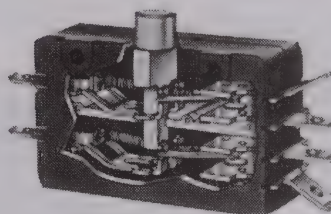
MINIATURE LIGHT AND STANDARD FORCE



Series Ratings
E21 0.1 amps 125 VAC
Gold Crosspoint Contacts
E22 3 amps 125/250 VAC
E23 5 amps—¼ HP, 125/250 VAC
E33 10 amps—½ HP, 125/250 VAC
E34 15 amps—½ HP, 125/250 VAC

Part No.	Fig.	Terminal	Circuitry	Operating Force (Max. gms.)	Price Each
E21-00A	A	QC	SPDT	75	\$4.26
E21-00AX	A	QC	SPDT	15	4.50
E21-50H	B	QC	SPDT	35	4.66
E21-50K	C	QC	SPDT	35	5.09
E21-85HX	B	QC	SPDT	2	4.88
E22-00A	A	QC	SPDT	75	2.44
E22-00AX	A	QC	SPDT	15	2.86
E22-00K	C	QC	SPDT	75	3.24
E22-50H	B	QC	SPDT	35	2.81
E22-50HX	B	QC	SPDT	8	3.22
E22-50K	C	QC	SPDT	35	3.24
E22-55HX	B	QC	SPDT	4	3.22
E22-85HX	B	QC	SPDT	2	3.22
E23-00A	A	QC	SPDT	170	2.39
E23-00AX	A	QC	SPDT	45	2.82
E23-00K	C	QC	SPDT	170	3.21
E23-50K	C	QC	SPDT	86	3.21
E23-55HX	B	QC	SPDT	10	3.19
E23-85HX	B	QC	SPDT	6	3.19
E33-00A	A	QC	SPDT	285	2.39
E33-00AX	A	QC	SPDT	75	2.82
E33-00K	C	QC	SPDT	285	3.21
E33-20K	C	Solder	SPDT	285	3.21
E33-50H	B	QC	SPDT	144	2.77
E33-50K	C	QC	SPDT	144	3.21
E33-55HX	B	QC	SPDT	17	3.19
E33-75HX	B	QC	SPDT	22	3.19
E33-85HX	B	QC	SPDT	10	3.19
E34-00A	A	QC	SPDT	400	2.39
E34-00K	C	QC	SPDT	400	3.21
E34-50H	B	QC	SPDT	200	2.77
E34-50K	C	QC	SPDT	200	3.21
E34-55HX	B	QC	SPDT	22	3.19
E34-85HX	B	QC	SPDT	13	3.19

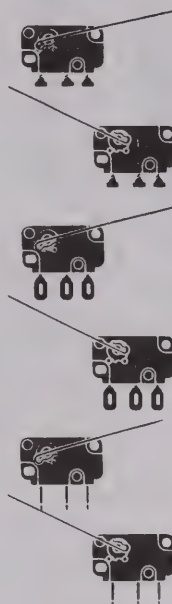
GENERAL PURPOSE DOUBLE POLE



Series Ratings
E19 15 amps 125/250 VAC
¼ HP, 125 VAC—1½ HP, 250 VAC
E20 20 amps 125/250 VAC
1 HP, 125 VAC—2 HP, 250 VAC
UL Recognized and CSA Certified.

Part No.	Fig.	Terminal	Circuitry	Operating Force (Max. gms.)	Price Each
E19-00A	A	QC	DPDT	850	\$4.88
E19-00H	B	QC	DPDT	205	5.76
E19-00M	E	QC	DPDT	850	5.84
E19-50H	G	QC	DPDT	130	5.77
E20-00A	A	QC	DPDT	1280	7.30
E20-00K	D	QC	DPDT	425	8.86

LOW TORQUE



-00B	Clockwise	Standard Parallel .205"
-00R	Clockwise	Standard Parallel .187"
-00E	Counter Clockwise	Standard Parallel .205"
-00T	Counter Clockwise	Standard Parallel .187"
-50B	Clockwise	Vertical Twist .205"
-50R	Clockwise	Vertical Twist .187"
-50E	Counter Clockwise	Vertical Twist .205"
-60B	Clockwise	Vertical Straight .205"
-60E	Counter Clockwise	Vertical Straight .205"

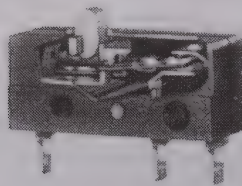
Series Ratings
E51 6 amps 250 VAC
UL Recognized and CSA Certified.
VDE Approved.

Part No.	Rotation	Circuitry	Price Each
E51-00B	CW	SPDT	\$7.39
E51-00R	CW	SPDT	7.39
E51-00E	CCW	SPDT	7.39
E51-00T	CCW	SPDT	7.39
E51-50B	CW	SPDT	7.39
E51-50R	CW	SPDT	7.39
E51-50E	CCW	SPDT	7.39
E51-60B	CW	SPDT	7.39
E51-60E	CCW	SPDT	7.39

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E SERIES

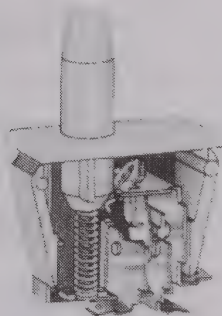
SUBMINIATURE



Series	Ratings
E61	5 amps 125/250 VAC
E62	10.1 amps 125/250 VAC 1/4 HP, 125 VAC
E63	0.1 amps 125 VAC Gold crosspoint contacts

Part No.	Fig.	Terminal	Circuitry	Operating Force (Max. gms.)	Price Each
E61-00A	A	.093 QC	SPDT	90	\$3.27
E61-00H	B	.093 QC	SPDT	27	3.84
E61-00K	C	.093 QC	SPDT	30	4.36
E61-10A	A	SS	SPDT	90	3.26
E61-10H	B	SS	SPDT	27	3.84
E61-10K	C	SS	SPDT	30	4.36
E61-50H	B	.093 QC	SPDT	9	3.84
E61-50K	C	.093 QC	SPDT	10	4.36
E61-60H	B	SS	SPDT	9	3.84
E62-00A	A	.093 QC	SPDT	212	3.27
E62-00H	B	.093 QC	SPDT	56	3.84
E62-00K	C	.093 QC	SPDT	65	4.36
E62-10A	A	SS	SPDT	212	3.27
E62-10H	B	SS	SPDT	56	3.84
E62-10K	C	SS	SPDT	65	4.36
E62-50H	B	.093 QC	SPDT	20	3.84
E62-60H	B	SS	SPDT	20	3.84
E63-00A	A	.093 QC	SPDT	90	5.62
E63-00H	B	.093 QC	SPDT	27	6.17
E63-00K	C	.093 QC	SPDT	30	6.69
E63-10K	C	SS	SPDT	30	6.69
E63-30A	A	.110 QC	SPDT	90	5.62

PANEL MOUNT PUSHBUTTON SINGLE POLE

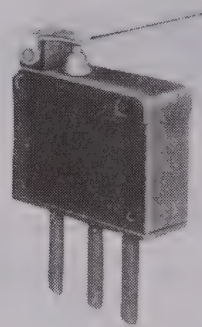


Series	Ratings
E68	0.1 amps 125 VAC Gold crosspoint contacts
E69	10 amps 125/250 VAC 1/4 HP, 125/250 VAC

UL Recognized and CSA Certified.

Part No.	Fig.	Terminal	Circuitry	Operating Force (Max. gms.)	Price Each
E68-00A	A	.187 QC	SPDT	425	\$5.25
E68-30A	C	.187 QC	SPDT	425/285	6.17
E69-00A	A	.187 QC	SPDT	425	3.08
E69-30A	C	.187 QC	SPDT	425/285	4.11
E69-40A	D	.187 QC	SPDT	425	3.08

WEATHERPROOF

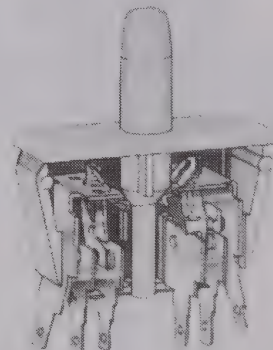


Series	Ratings
E72	10.1 amps 1/4 HP, 125/250 VAC
E73	0.1 amps 125 VAC Gold crosspoint contacts

UL Recognized and CSA Certified.

Part No.	Fig.	Terminal	Circuitry	Operating Force (Max. gms.)	Price Each
E72-40A	A	10" 16 Gage	SPDT	300	\$ 9.52
E72-40H	B	10" 16 Gage	SPDT	67	10.18

PANEL MOUNT PUSHBUTTON DOUBLE POLE



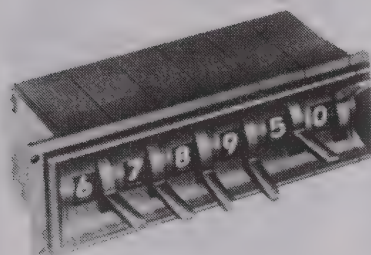
Series	Ratings
E78	0.1 amps 125 VAC Gold crosspoint contacts
E79	10 amps 125/250 VAC 1/4 HP, 125/250 VAC

UL Recognized and CSA Certified.

Part No.	Fig.	Terminal	Circuitry	Operating Force (Max. gms.)	Price Each
E79-00A	A	.187 QC	DPDT	680	\$5.19
E79-30A	C	.187 QC	DPDT	757/567	6.80

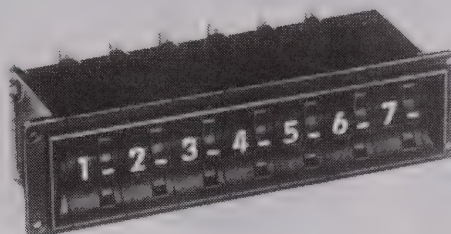
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ELECTRONICS EXPERTS ON ALL YOUR SPECIAL
EQUIPMENT OR COMPONENT NEEDS.

LEVERWHEEL, MINIATURE SIZE BACK MOUNT



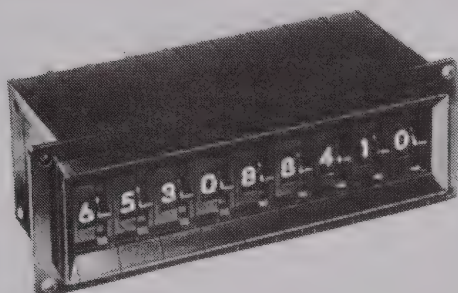
Part No.*	Output Code	Positions	Readout	Finish	Price Each
L20-02A	BCD	10	0-9	Gloss	\$12.78
L20-02M	BCD	10	0-9	Matte	13.20
L20-52A	BCD w/Ext'd Board for Diodes	10	0-9	Gloss	14.71

THUMBWHEEL, MINIATURE SIZE BACK MOUNT



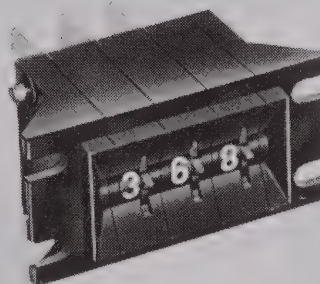
Part No.*	Output Code	Positions	Readout	Finish	Price Each
T20-02A	BCD	10	0-9	Gloss	\$10.21
T20-02M	BCD	10	0-9	Matte	10.63
T20-04A	BCD & Comp 1 Common	10	0-9	Gloss	14.02
T20-52A	BCD w/Ext'd Board for Diodes	10	0-9	Gloss	12.78

THUMBWHEEL, INDUSTRIAL SIZE BACK MOUNT



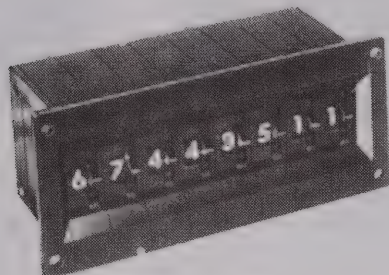
Part No.*	Output Code	Positions	Readout	Finish	Price Each
T10-02A	BCD	10	0-9	Gloss	\$11.80
T10-52A	BCD w/Ext'd Board for Diodes	10	0-9	Gloss	15.23

THUMBWHEEL, SUBMINIATURE SIZE BACK MOUNT



Part No.*	Output Code	Positions	Readout	Finish	Price Each
T50-02M	BCD	10	0-9	Matte	\$ 9.06
T50-52M	BCD w/Ext'd Board for Diodes	10	0-9	Matte	11.80

THUMBWHEEL, INDUSTRIAL SIZE FRONT MOUNT



Part No.*	Output Code	Positions	Readout	Finish	Price Each
T11-02A	BCD	10	0-9	Gloss	\$11.91
T11-52A	BCD w/Ext'd Board for Diodes	10	0-9	Gloss	15.63

THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS
WE HAVE AVAILABLE. PLEASE
CONTACT US FOR ADDITIONAL PRODUCT INFORMATION.

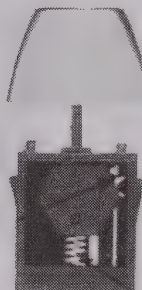
KEYBOARD SWITCHES MX SERIES—LOW PROFILE DIN COMPATIBLE GOLD CROSSPOINT CONTACT



- Low profile—.689" from PC board to center point of home row keycap top with lo-pro spherical cylindrical sculptured keycaps
- Linear or tactile feel—positive stop
- Full travel—.160"

Part No.	Description	Price Each
MX1A-11NN	Standard force, linear, face-plate mount	\$0.87
MX1A-11NW	Standard force, linear PCB mount	.87

M7 SERIES—REGULAR PROFILE GOLD CROSSPOINT KEYBOARD SWITCHES

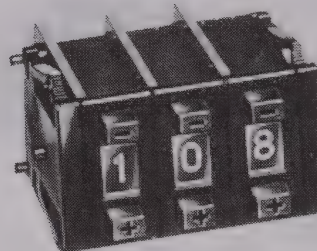


The proven design concept—crossed knife edge contact configuration—provides high force per unit of contact area and virtually eliminates contact closure interference by contaminants. Precious metal contact material (WE alloy #1) consists of 69% gold, 25% silver and 6% platinum. Contact interfaces are inert to chemical action with resultant low contact resistance (typically 25 milliohms).

REGULAR PROFILE KEYSWITCHES

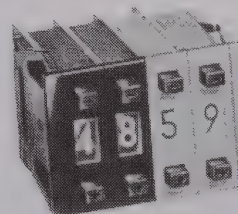
Part No.	Operating Force	Description	Price Each
M73-0120	2½ oz.	Momentary, 1 A contact	\$2.31

PUSHWHEEL SUB-SUBMINIATURE SIZE FRONT SNAP-IN MOUNT



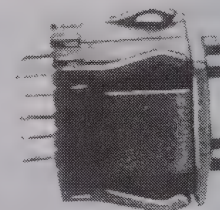
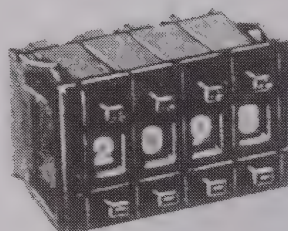
Part No.*	Output Code	Positions	Readout	Finish	Price Each
T55-02M	BCD	10	0-9	Matte	\$11.03

PUSHWHEEL SUB-SUBMINIATURE SIZE FRONT SNAP-IN MOUNT



Part No.*	Output Code	Positions	Readout	Finish	Price Each
T56-01M	Decimal	10	0-9	Matte	\$11.03

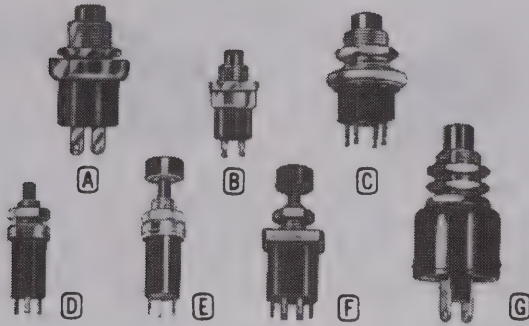
PUSHWHEEL SUB-SUBMINIATURE SIZE "DUSTPROOF" PC BOARD FRONT MOUNT



Part No.*	Output Code	Positions	Readout	Finish	Price Each
T59-02M	BCD	10	0-9	Matte	\$5.44

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WIPING AND SNAP ACTION CONTACTS



SERIES 10 & 4000 SPST WIPING ACTION (FIG. A)

Available in standard contact action or positive-feel contact action (10-100, 10-101); detent system is independent of contact system. Silver-plated beryllium copper contact solder terminals; tinned music wire spring. **Total Button Travel:** .140" ± .032" (4001, 10-9, 10-100); .110" ± .020" - .010" (4002, 10-10, 10-101). **Rated:** 1 amp at 115 VAC resistive for 100,000 operations. **Mounting:** 15/32-32 UNS-2A thread, .375" long. Fits 31/64" dia. hole. **Size:** .800" O.D.; .965" behind panel; 1.50" overall.

Part Number	Description	Price Each
4001	SPST-NO, red button	★
4001UL	SPST-NO, red button UL listed	★
10-09	SPST-NO, black button	★
10-09UL	SPST-NO, black button UL listed	★
10-100	SPST-NO, red button, pos. feel	★
10-101	SPST-NC, black button, pos. feel	★

SERIES 23 MINIATURE SPST WIPING ACTION (FIG. B)

Miniature switches with silver-plated brass contact solder terminals; tinned music wire spring. **Total Button Travel:** .095" ± .010". **Rated:** 1/4 amp at 115 VAC resistive for 100,000 operations. **Mounting:** 5/16-32 UNEF-2A thread, .250" long. Fits 21/64" dia. hole. **Size:** .468" O.D.; .663" behind panel; 1.059" overall.

23-1	SPST-NO, red button	★
23-4	SPST-NO, black button	★

SERIES 35 DOUBLE POLE WIPING ACTION (FIG. C)

Momentary contact switch has fine silver contact solder terminals; tinned music wire spring. **Total Button Travel:** .062" ± .015". **Rated:** 1/2 amp at 115 VAC resistive for 100,000 operations. **Mounting:** 15/32-32 UNS-2A thread, .375" long. Fits 31/64" dia. hole. **Size:** .800" O.D.; .743" behind panel; 1.274" overall.

35-1	DPST-NO, red button	★
35.3	DPST-NO, black button	★

SERIES 46 SPDT AND DPDT WIPING ACTIONS (FIGS. D, E, F)

Long wipe, non-shorting contact switches with silver contact surfaces, plated and inlaid over phosphor bronze. Phenolic base. Solder-type terminals are solder clad. **Contact Resistance:** 25 milliohms, initially. **Rating:** 250 mA 15 115V AC resistance for 250,000 operations. **Total Travel:** 180° min. **Size (Behind Panel Length, Overall Length, and Outside Diameter/Width):** 0.89" and 1.33" × .44" dia. (Fig. D); 89" and 1.53" × .44" dia. (Fig. E); 92" and 1.56" × .63" width (Fig. F). **Mounting Hole:** 17/64".

Part Number	Fig.	Description	Price Each
46-101 RED*	D	SPDT, red button	★
46-102 RED*	E	SPDT, red cap	★
46-200 RED*	F	DPDT, red button	★

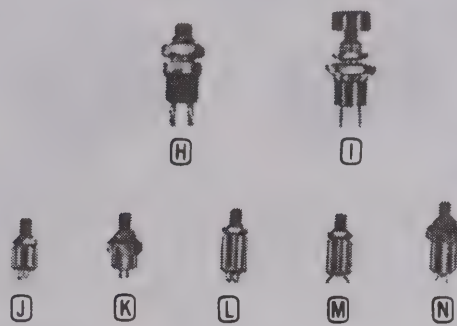
*For black button, substitute **BLK** for **RED**.

SERIES 2000 SNAP ACTION (FIG. G)

Momentary contact design: solder terminals or "Faston" terminal to accommodate 1/4" push-on termination. Extremely fast make-and-break, audible click produced by snap action mechanism. Fine silver fixed and moving contacts. **Total Button Travel:** .065" approx. **Rated:** 10 amps at 115 VAC resistive for 25,000 operations. **Mounting:** 15/32-UNS-2A thread, .454" long. Fits 31/54" dia. hole. **Size:** .880" O.D.; 1.176" behind panel; 1.903" overall.

Pzrt Number	Description	Price Each
2201	SPST-NO, red button	★
7-7	SPST-NO, black button	★
2202	SPST-NO, black button	★
7-8	SPST-NC, red button	★

BUTT, CONTACTS, MINIATURE



SERIES 30 BUTT CONTACT (FIGS. H AND I)

Miniature SPST-NO or-NC momentary contact switches have fine silver contact surfaces and silver-plated commercial bronze terminals; economy plated styles have contact area and terminals of gold over nickel-plated brass. Solder terminals. **Total Travel:** .125" for overtravel style (.020" overtravel); .064" for others. **Rating:** 1A at 115V AC resistive for the following operations: 1 million (30-1, 30-2, 300-3, 30-6); 100,000 (30-251, 30-252); 500,000 (30-15, 30-37); 1 million operations at 150 mA, 5V DC (30-601). **UL Rating:** 5A at 115V for 6,000 operations (30-1 UL, 30-2 UL, 30-3 UL, 30-6 UL). **Mounting:** 1-4-32 UNEF-2A thread, .250" long; fits 17/64" diameter hole.

Fig. H: Small, unsealed switch in NO, NO-UL, NC, NC-UL, NO-Overtravel, NO-Economy plated. **Diameter:** 3.75". **Length:** .592" behind panel and .992" overall (30-1, 30-3, 30-601); .677" behind panel and 1.077" overall (30-15, 30-37); .635" behind panel and 1.005" overall (30-2, 30-6).

Fig. I: Sealed switch in NO or NC. **Width:** .437" across hex flats. **Length:** .645" behind panel and 1.191" overall (30-252); .632" behind panel and 1.178" overall (30-251).

Part Number	Fig.	Description and Button Color	Price Each
30-1	H	NO, red	★
30-3	H	NO, black	★
30-1 UL	H	NO, UL listed, red	★
30-3 UL	H	NO, UL listed, black	★
30-601 RED*	H	NO, economy, red	★
30-251 RED*	I	NO, sealed, red	★
30-15	I	NO, overtravel, red	★
3037	I	NO, overtravel, black	★
30-6	H	NC, red	★
30-2	H	NC, black	★
30-6UL	H	NC, red	★
30-2UL	H	NC, black	★
30-252 RED*	I	NC, sealed, red	★

*For black button on these parts, substitute **BLK** for **RED**.

SERIES 39 BUTT CONTACT (FIGS. J THRU N)

MOMENTARY SPST-NO (Fig. JK), -NO Sealed (Fig. K) -NO Overtravel (Fig. L), -NC (Fig. M), and -NC Sealed (Fig. N) types with solder terminals molded into base to prevent flux contamination. **Rated (Operations at Load):** 1 million at 20 mA 20V DC (39-601); 1 million at 500 mA 115V AC (39-1, 39-3); 250,000 at 500 mA 115V AV (39-152). **Breakdown Voltage:** 500V AC. **Total Button Travel:** .035" (Fig. J, K), .042" (Fig. M, N); .130" with .015" minimum overtravel (Fig. L). **Base:** Phenolic (39-2, 39-352); Diallyl (all others). **Shorting Bar:** fine silver (39-2, 39-352); gold over nickel over brass (39-601); gold plate over fine silver (all others). **Terminals:** Fine silver (39-2, 39-352); commercial bronze with contact surface of gold-plated fine silver (all others). **Width:** 250" dia. (Fig. J, L, M); .312" across hex flats (Figs. K, M). **Length:** (Behind Panel and Overall); .315" and .615" (Fig. J); .350" and .650" (Fig. K); .455" and .755" (Fig. L); .490" and .780" (Fig. M); .529" and .819" (Fig. N); **Mounting:** 8-40 UNS-2A thread, .125" long; fits 11/64" dia. hole.

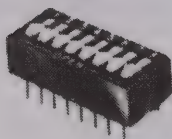
Part Number	Fig.	Description	Price Each
39-1 (or 39-3)	J	NO, red (black)	★
39-601 RED*	J	NO, economy, red	★
39-351 RED*	K	NO, sealed, red	★
39-12	L	NO, overtravel, red	★
39-2	M	NC, red	★
39-352 RED*	N	NC, red	★

*For black button, substitute **BLK** for **RED**.

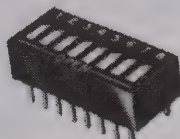
★ PRICING ON REQUEST

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ISO 9000 QUALITY SYSTEMS STANDARDS.**

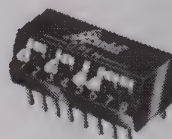
SERIES 76 SPST ROCKER ACTUATED DIP SWITCHES



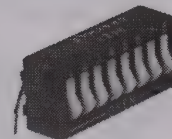
Raised Type



Recessed Type



Piano-Dip™ Type



Right Angle Type

Series 76 Single Pole/Single Throw, rocker-actuated switches have spring loaded, sliding balls as shorting members to provide reliable contact. Standard epoxy sealed base prevents flux entry during wave soldering, and optional tape seal prevents flux and cleaning solution entry through actuators. **Size:** .380" W x .315" H (raised), .267" H (recessed), .302" H (PIANO-DIP); Right Angle Mount styles are .380" H x .380" deep; length shown in chart. Switch cover is red polyester; base contacts are gold over nickel plated copper alloy; shorting member is gold over nickel plated brass; terminals are solder over nickel plated copper alloy; tape seal is polyester film. Switches will make and break 10,000 operations at 50 mA, 30 VDC. **Military Styles**, qualified to MS83504/01 and MS83504/02, are also available.

INDUSTRIAL TYPES

No. of Switches	Length (In.)	Part Number	Price Each
BOTTOM SEAL ONLY—RAISED TYPE			
2	0.28	76SB02	★
3	0.38	76SB03	★
4	0.48	76SB04	★
5	0.58	76SB05	★
6	0.68	76SB06	★
7	0.78	76SB07	★
8	0.88	76SB08	★
9	0.98	76SB09	★
10	1.08	76SB10	★
12	1.28	76SB12	★
BOTTOM SEAL ONLY—RECESSED TYPE			
2	0.28	76RSB02	★
3	0.38	76RSB03	★
4	0.48	76RSB04	★
5	0.58	76RSB05	★
6	0.68	76RSB06	★
7	0.78	76RSB07	★
8	0.88	76RSB08	★
9	0.98	76RSB09	★
10	1.08	76RSB10	★
12	1.28	76RSB12	★

No. of Switches	Length (In.)	Part Number	Price Each
BOTTOM SEAL AND TYPE SEAL—RAISED TYPE			
2	0.28	76SB02S	★
3	0.38	76SB03S	★
4	0.48	76SB04S	★
5	0.58	76SB05S	★
6	0.68	76SB06S	★
7	0.78	76SB07S	★
8	0.88	76SB08S	★
9	0.98	76SB09S	★
10	1.08	76SB10S	★
12	1.28	76SB12S	★
BOTTOM SEAL AND TYPE SEAL—RECESSED TYPE			
2	0.28	76RSB02S	★
3	0.38	76RSB03S	★
4	0.48	76RSB04S	★
5	0.58	76RSB05S	★
6	0.68	76RSB06S	★
7	0.78	76RSB07S	★
8	0.88	76RSB08S	★
9	0.98	76RSB09S	★
10	1.08	76RSB10S	★
12	1.28	76RSB12S	★

THE PIANO-DIP™ SIDE ACTUATED TYPE

No. of Switches	Length (In.)	Part Number	Price Each
BOTTOM SEAL ONLY—SIDE ACTUATED			
4	0.48	76PSB04	★
5	0.58	76PSB05	★
6	0.68	76PSB06	★
7	0.78	76PSB07	★
8	0.88	76PSB08	★
9	0.98	76PSB09	★
10	1.08	76PSB10	★

No. of Switches	Length (In.)	Part Number	Price Each
BOTTOM SEAL AND TAPE SEAL—SIDE ACTUATED			
4	0.48	76PSB04S	★
5	0.58	76PSB05S	★
6	0.68	76PSB06S	★
7	0.78	76PSB07S	★
8	0.88	76PSB08S	★
9	0.98	76PSB09S	★
10	1.08	76PSB10S	★

RIGHT ANGLE MOUNT TYPES

No. of Switches	Length (In.)	Part Number	Price Each
BOTTOM SEAL ONLY—R.A. RAISED TYPE			
2	0.28	76SB02RA	★
3	0.38	76SB03RA	★
4	0.48	76SB04RA	★
5	0.58	76SB05RA	★
6	0.68	76SB06RA	★
7	0.78	76SB07RA	★
8	0.88	76SB08RA	★
9	0.98	76SB09RA	★
10	1.08	76SB10RA	★
12	1.28	76SB12RA	★
BOTTOM SEAL ONLY—R.A. RECESSED TYPE			
2	0.28	76RSB02RA	★
3	0.38	76RSB03RA	★
4	0.48	76RSB04RA	★
5	0.58	76RSB05RA	★
6	0.68	76RSB06RA	★
7	0.78	76RSB07RA	★
8	0.88	76RSB08RA	★
9	0.98	76RSB09RA	★
10	1.08	76RSB10RA	★
12	1.28	76RSB12RA	★

No. of Switches	Length (In.)	Part Number	Price Each
BOTTOM SEAL AND TAPE SEAL—R.A. RAISED			
2	0.28	76SB02SRA	★
3	0.28	76SB03SRA	★
4	0.28	76SB04SRA	★
5	0.28	76SB05SRA	★
6	0.28	76SB06SRA	★
7	0.28	76SB07SRA	★
8	0.28	76SB08SRA	★
9	0.28	76SB09SRA	★
10	0.28	76SB10SRA	★
12	0.28	76SB12SRA	★
BOTTOM SEAL AND TAPE SEAL—R.A. RECESSED TYPE			
2	0.28	76RSB02SRA	★
3	0.28	76RSB03SRA	★
4	0.28	76RSB04SRA	★
5	0.28	76RSB05SRA	★
6	0.28	76RSB06SRA	★
7	0.28	76RSB07SRA	★
8	0.28	76RSB08SRA	★
9	0.28	76RSB09SRA	★
10	0.28	76RSB10SRA	★
12	0.28	76RSB12SRA	★

★ PRICING ON REQUEST

**THIS MANUFACTURER HAS ACHIEVED
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210 TYPE VITREOUS ENAMELED RESISTORS



Vitreous enamel resistors wound on ceramic cores with a small strip of the wire turns exposed to form a contact surface for the embossed contact of a screwdriver-adjustable lug. One lug supplied with each unit; mounting brackets must be purchased separately. Tolerance, $\pm 10\%$. Wattage ratings are for use in free air.

Ohms	Catalog Numbers						
	12 Watt	25 Watt	50 Watt	75 Watt	100 Watt	175 Watt	225 Watt
1	D12K1R0	D25K1R0	D50K1R0	D75K1R0	D100K1R0	D175K1R0	D225K1R0
2	D12K2R0	D25K2R0	D50K2R0	D75K2R0	D100K2R0	D175K2R0	D225K2R0
3	D12K3R0	D25K3R0	D50K3R0	D75K3R0	D100K3R0	D175K3R0	D225K3R0
4			D50K4R0	D75K4R0*	D100K4R0	D175K4R0	D225K4R0
5	D12K5R0	D25K5R0	D50K5R0	D75K5R0	D100K5R0	D175K5R0	D225K5R0
7.5	D12K7R5	D25K7R5					
10	D12K10R	D25K10R	D50K10R	D75K10R	D100K10R	D175K10R	D225K10R
15	D12K15R	D25K15R	.....	D75K15R	.....	.....	.....
20	D12K20R	D25K20R	.....	.....	.....	.....	.....
25	D12K25R	D25K25R	D50K25R	D75K25R	D100K25R	D175K25R	D225K25R
50	D12K50R	D25K50R	D50K50R	D75K50R	D100K50R	D175K50R	D225K50R
75	D12K75R	D25K75R	D50K75R	.....	.....	.....	.....
100	D12K100	D25K100	D50K100	D75K100	D100K100	D175K100	D225K175
150	D12K150	D25K150	D50K150	.....	.....	.....	.....
200	D12K200	D25K200	D50K200	D75K200	.....	.....	.....
250	D12K250	D25K250	D50K250	D75K250	D100K250	D175K250	D225K250
300	D12K300	D25K300	D50K300	D75K300	.....	.....	.....
350	D12K350*	.....	.....	.....	.....	.....	.....
400	D12K400	D25K400	D50K400	D75K400	.....	.....	.....
500	D12K500	D25K500	D50K500	D75K500	D100K500	D175K500	D225K500
600	D12K600*	.....	.....	.....	.....	.....	.....
750	D12K750	D25K750	D50K750	D75K750	.....	.....	.....
800	D12K800*	D25K800	D50K800	D75K800*	.....	.....	.....
1K	D12K1K0	D25K1K0	D50K1K0	D75K1K0	D100K1K0	D175K1K0	D225K1K0
1.25K	D12K1K25	D25K1K25	D50K1K25*	D75K1K25*	.....	.....	.....
1.5K	D12K1K5	D25K1K5	D50K1K5	D75K1K5	D100K1K5	D175K1K5	D225K1K5
2K	D12K2K0	D25K2K0	D50K2K0	D75K2K0	D100K2K0	D175K2K0	D225K2K0
2.25K	D12K2K25*	D25K2K25*	D50K2K25*	D75K2K25*	.....	.....	.....
2.5K	D12K2K5	D25K2K5	D50K2K5	D75K2K5	D100K2K5	D175K2K5	D225K2K5
3K	D12K3K0	D25K3K0	D50K3K0	D75K3K0	D100K3K0	D175K3K0	D225K3K0
3.5K	D12K3K5	D25K3K5*	D50K3K5*	D75K3K5*	.....	.....	.....
4K	D12K4K0	D25K4K0*	D50K4K0*	D75K4K0*	.....	.....	.....
4.5K	D12K4K5*	D25K4K5*	D50K4K5*	D75K4K5*	.....	.....	.....
5K	D12K5K0	D25K5K0	D50K5K0	D75K5K0	D100K5K0	D175K5K0	D225K5K0
6K	D12K6K0*	D25K6K0*	D50K6K0*	D75K6K0*	.....	.....	.....
7K	D12K7K0	D25K7K0	D50K7K0*	D75K7K0*	.....	.....	.....
7.5K	D12K7K5	D25K7K5	D50K7K5	D75K7K5*	.....	.....	.....
8K	D12K8K0*	D25K8K0*	D50K8K0*	D75K8K0*	.....	.....	.....
8.5K	D12K8K5*	.....	.....	.....	.....	.....	.....
9K	D12K9K0*	D25K9K0*	D50K9K0*	D75K9K0*	.....	.....	.....
10K	D12K10K	D25K10K	D50K10K	D75K10K	D100K10K	D175K10K	D225K10K
12K	.....	D25K12K*	D50K12K*	D75K12K*	.....	.....	.....
15K	.....	D25K15K	D50K15K	D75K15K*	D100K15K*	D175K15K*	D225K15K*
20K	.....	D25K20K	D50K20K	D75K20K	D100K20K*	D175K20K*	D225K20K*
25K	.....	D25K25K	D50K25K	D75K25K*	D100K25K*	D175K25K*	D225K25K*
30K	.....	.....	D50K30K	D75K30K*	D100K30K*	D175K30K*	D225K30K*
35K	.....	.....	.....	D75K35K*	.....	.....	.....
40K	.....	.....	D50K40K*	D75K40K*	D100K40K*	D175K40K*	D22K40K*
45K	.....	.....	.....	D75K45K*	.....	.....	.....
50K	.....	.....	D50K50K	D75K50K*	D100K50K	D175K50K*	D225K50K
60K	.....	.....	D50K60K*	D75K60K*	.....	.....	.....
75K	.....	.....	.....	.....	D100K75K*	D175K75K*	D225K75K*
80K	.....	.....	D50K80K*	D75K80K*	.....	.....	.....
100K	.....	.....	D50K100K	D75K100K*	D100K100K	D175K100K	D225K100K*

*Handling charge extra.

ADJUSTABLE LUGS

One screwdriver-adjustable lug is supplied with each adjustable power resistor.

Mr. No.	Core Dia. (In.)	Price Each
STANDARD SCREWDRIVER ADJUSTABLE		
2115	5/16	\$0.75
2121	9/16	.75
2125	3/4	.97
2133	1 1/8	.93
STANDARD WITH PHENOLIC KNOB		
2122	9/16	\$3.20
2126	3/4	3.20
2134	1 1/8	4.35
SILVER CONTACT SCREWDRIVER		
2116	5/16	\$3.35
2123	9/16	2.40
2127	3/4	2.23
2135	1 1/8	5.08
PHENOLIC KNOB TYPE WITH SILVER CONTACT		
2124	9/16	\$4.85
2128	3/4	4.85
2136	1 1/8	8.02

Values, Ohms	Price Each
12-WATT TYPE 210	
Core, 1 1/4" x 5/16". Mtg. centers, 2 1/8".	
1-7.5	\$ 4.46
10-1K	4.38
1.25K-5K	4.63
6K-10K	4.97
25-WATT TYPE 210	
Core, 2" x 9/16". Mtg. centers, 2 3/4".	
1-7.5	\$ 5.69
10-4.5K	5.25
5K-9K	5.55
10K-25K	5.95
50-WATT TYPE 210	
Core, 4" x 9/16". Mtg. centers, 4 3/4".	
1-4	\$ 8.45
5-800	6.36
1K-4.5K	6.55
5K-9K	6.73
10K-40K	7.21
50K-100K	7.76
75-WATT TYPE 210	
Core 6" x 9/16". Mtg. centers, 6 3/4".	
1-5	\$11.35
10-800	7.95
1K-4.5K	8.19
5K-9K	8.42
10K-45K	9.02
50K-100K	9.70
100-WATT TYPE 210	
Core 6 1/4" x 3/4". Mtg. centers, 7 3/4".	
1-5	\$14.19
10-5K	9.94
10K-40K	11.28
50K-100K	12.12
175-WATT TYPE 210	
Core, 8 1/4" x 1 1/8". Mtg. centers, 9 3/4".	
1-5	\$21.30
10-5K	14.91
10K-40K	16.92
50K-100K	18.19
225-WATT TYPE 210	
Core, 10 1/2" x 1 1/8". Mtg. centers, 11 3/4".	
1-5	\$24.26
10-5K	16.99
10K-40K	19.27
50K-100K	20.72

MOUNTING BRACKETS

Mounting brackets are available in plated steel, spring steel, and brass. Spring steel brackets are excellent where vibration is involved; brass brackets are used with non-inductive resistors or for corrosion resistance.

No.	Diam.	Price per Pkg. 100
STANDARD PLATED STEEL		
5	5/16"	\$14.18
9	9/16"	14.70
12	3/4"	18.75
18	1 1/8"	19.16
SPRING STEEL		
5S	5/16"	\$15.08
9S	9/16"	15.08
12S	3/4"	20.80
18S	1 1/8"	23.92

SERIES 20 CONFORMAL COATED WIREWOUND RESISTORS

Tolerance, $\pm 5\%$. Dielectric Withstanding Voltage, 500 Volts for 1-watt size, 1000 Volts for all others. Size: 1 W, 0.406" $\times$ 0.156"; 3 W, 0.562" $\times$ 0.250"; 5 W, 1.000" $\times$ 0.250"; 7 W, 1.250" $\times$ 0.343"; 10 W, 1.797" $\times$ 0.343".

Catalog Numbers						Catalog Numbers					
Ohms	1 Watt	3 Watt	5 Watt	7 Watt	10 Watt	Ohms	1 Watt	3 Watt	5 Watt	7 Watt	10 Watt
1	21J1R0	23J1R0	25J1R0	27J1R0	20J1R0	560	21J560	23J560	25J560	27J560*	20J560*
1.5	21J1R5	23J1R5	25J1R5	27J1R5	20J1R5	600	21J600	23J600	25J600	27J600*	20J600
2	21J2R0	23J2R0	25J2R0	27J2R0*	20J2R0	680	21J680	23J680	25J680	27J680*	20J680
2.2	21J2R2	23J2R2	25J2R2	27J2R2*	20J2R2	750	21J750	23J750	25J750	27J750*	20J750
3	21J3R0	23J3R0	25J3R0	27J3R0	20J3R0	800	21J800	23J800	25J800	27J800*	20J800*
4	21J4R0	23J4R0	25J4R0	27J4R0*	20J4R0	820	21J820	23J820	25J820	27J820*	20J820
5	21J5R0	23J5R0	25J5R0	27J5R0*	20J5R0	900	21J900*	23J900	25J900	27J900*	20J900*
7.5	21J7R5	23J7R5	25J7R5	27J7R5*	20J7R5	1K	21J1K0	23J1K0	25J1K0	27J1K0	20J1K0
10	21J10R	23J10R	25J10R	27J10R*	20J10R	1.1K	21J1K1*	23J1K1	25J1K1	27J1K1*	20J1K1
12	21J12R*	23J12R	25J12R	27J12R*	20J12R	1.2K	21J1K2	23J1K2	25J1K2	27J1K2*	20J1K2
15	21J15R	23J15R	25J15R*	27J15R	20J15R	1.5K	21J1K5	23J1K5	25J1K5	27J1K5*	20J1K5
18	21J18R	23J18R	25J18R	27J18R*	20J18R	1.8K	21J1K8	23J1K8	25J1K8*	27J1K8*	20J1K8*
20	21J20R	23J20R	25J20R	27J20R*	20J20R	2K	21J2K0*	23J2K0	25J2K0	27J2K0*	20J2K0
22	21J22R	23J22R	25J22R	27J22R*	20J22R	2.2K	21J2K2	23J2K2	25J2K2	27J2K2*	20J2K2
25	21J25R*	23J25R	25J25R	27J25R*	20J25R	2.5K	21J2K5	23J2K5	25J2K5	27J2K5*	20J2K5
27	21J27R	23J27R	25J27R	27J27R*	20J27R*	2.7K	21J2K7	23J2K7	25J2K7*	27J2K7*	20J2K7
30	21J30R	23J30R	25J30R	27J30R*	20J30R	3K	21J3K0	23J3K0	25J3K0	27J3K0*	20J3K0
33	21J33R	23J33R	25J33R	27J33R*	20J33R	3.3K	.....	23J3K3	25J3K3	27J3K3*	20J3K3*
35	21J35R*	23J35R*	25J35R	27J35R*	20J35R	3.5K	.....	23J3K5*	25J3K5	27J3K5*	20J3K5*
39	21J39R	23J39R	25J39R*	27J39R*	20J39R	3.9K	.....	23J3K9	25J3K9	27J3K9*	20J3K9
40	21J40R	23J40R	25J40R	27J40R*	20J40R	4K	.....	23J4K0	25J4K0	27J4K0*	20J4K0
47	21J47R	23J47R	25J47R	27J47R*	20J47R	4.5K	.....	23J4K5*	25J4K5	27J4K5*	20J4K5*
50	21J50R	23J50R	25J50R	27J50R*	20J50R	4.7K	.....	23J4K7	25J4K7	27J4K7*	20J4K7
56	21J56R*	23J56R	25J56R	27J56R*	20J56R*	5K	.....	23J5K0	25J5K0	27J5K0	20J5K0
62	21J62R*	23J62R	25J62R	27J62R*	20J62R	6K	.....	23J6K0	25J6K0	27J6K0	20J6K0
68	21J68R	23J68R	25J68R	27J68R*	20J68R	6.8K	.....	23J6K8	25J6K8	27J6K8*	20J6K8*
75	21J75R	23J75R	25J75R	27J75R*	20J75R	7K	.....	23J7K0	25J7K0	27J7K0*	20J7K0*
82	21J82R	23J82R	25J82R	27J82R*	20J82R	7.5K	.....	23J7K5	25J7K5	27J7K5*	20J7K5
100	21J100	23J100	25J100	27J100	20J100	8K	.....	23J8K0	25J8K0	27J8K0*	20J8K0
120	21J120	23J120	25J120	27J120*	20J120	9K	.....	23J9K0	25J9K0*	27J9K0*	20J9K0*
125	21J125*	23J125	25J125	27J125	20J125	10K	.....	23J10K	25J10K	27J10K*	20J10K
150	21J150	23J150	25J150	27J150*	20J150	12K	.....	.....	25J12K	27J12K*	20J12K
180	21J180	23J180	25J180	27J180*	20J180	13K	.....	.....	.....	27J13K*	20J13K
200	21J200	23J200	25J200	27J200	20J200	15K	.....	.....	25J15K	27J15K*	20J15K
220	21J220	23J220	25J220	27J220*	20J220	17K	.....	.....	.....	27J17K*	20J17K*
225	21J225*	23J225*	25J225*	27J225*	20J225*	20K	.....	.....	25J20K	27J20K	20J20K
250	21J250	23J250	25J250	27J250*	20J250	22K	.....	.....	25J22K	27J22K*	20J22K*
270	21J270	23J270	25J270	27J270*	20J270*	25K	.....	.....	25J25K	27J25K*	20J25K
300	21J300	23J300	25J300	27J300*	20J300	30K	.....	.....	.....	.....	20J30K
330	21J330	23J330	25J330	27J330*	20J330	33K	.....	.....	.....	.....	20J33K*
350	21J350*	23J350*	25J350	27J350*	20J350	35K	.....	.....	.....	.....	20J35K*
390	21J390	23J390	25J390*	27J390*	20J390*	40K	.....	.....	.....	.....	20J40K
400	21J400*	23J400	25J400	27J400*	20J400	50K	.....	.....	.....	.....	20J50K
450	21J450*	23J450*	25J450	27J450*	20J450						
470	21J470	23J470	25J470	27J470*	20J470						
500	21J500	23J500	25J500	27J500	20J500						

PRICING

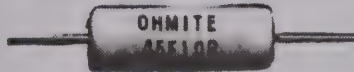
Values, Ohms	Price Each
1 WATT	
1.0-7.5	\$3.01
10-82	2.64
100-900	2.91
1K-3K	2.98
3 WATT	
1.0-7.5	\$1.24
10-470	1.05
500-900	1.32
1K-2.7K	1.51
3K-4.7K	1.86
5K-10K	2.13
5 WATT	
1.0-7.5	\$1.30
10-470	1.16
500-900	1.41
1K-2.7	1.63
3K-4.7	1.91
5K-15K	2.31
20K-25K	2.76

Values, Ohms	Price Each
7 WATT	
1.0-2.2	\$1.81
3.0-18	1.64
20-470	1.49
500-900	1.74
1K-1.2K	1.96
1.5K	1.87
1.8K-2.7K	1.96
3K-4.7K	2.25
5K-15K	2.66
20K-25K	3.10
10 WATT	
1.0-7.5	\$1.87
10-18	1.70
20-470	1.67
500-900	1.91
1K-2.7K	2.13
3K-4.7K	2.41
5K-17K	2.82
20K-50K	3.27

*Handling charge extra.

THROUGH OUR BUYING GROUP ASSOCIATION WITH EDBA WE CAN OFFER
YOU ACCESS TO MANY LINES NOT SHOWN IN THIS CATALOG.

SERIES 40 OHMICONE® CONFORMAL COATED WIREWOUND RESISTORS



Resistors designed for a wide range of commercial industrial, and communications equipment and systems. Feature low, stable T.G.; all-welded construction; and operation under high temperature conditions. Tolerance, $\pm 5\%$. Size: 1 W, 0.437" $\times$ 0.125" $\times$ 0.219"; 2 W, 0.406" $\times$ 0.219" $\times$ 0.250"; 3 W, 0.563" $\times$ 0.250"; 5 W, 0.937" $\times$ 0.343"; 10 W, 843" $\times$ 0.406".

Ohms	Catalog Numbers				
	1 Watt	2 Watt	3 Watt	5 Watt	10 Watt
0.1	41JR10	42JR10	43JR10	45JR10	40JR10
0.15	41JR15	42JR15	43JR15	45JR15	40JR15
0.2	41JR20	42JR20	43JR20	45JR20	40JR20
0.3	41JR30	42JR30	43JR30	45JR30	40JR30
0.4	41JR40	42JR40	43JR40	45JR40	40JR40
0.5	41JR50	42JR50	43JR50	45JR50	40JR50
0.75	41JR75	42JR75	43JR75	45JR75	40JR75
1	41JR10	42JR10	43JR10	45JR10	40JR10
1.5	41JR15	42JR15	43JR15	45JR15	40JR15
2	41JR20	42JR20	43JR20	45JR20	40JR20
2.2	41JR22	42JR22	43JR22	45JR22	40JR22
3	41JR30	42JR30	43JR30	45JR30	40JR30
4	41JR40	42JR40	43JR40	45JR40	40JR40
5	41JR50	42JR50	43JR50	45JR50	40JR50
7.5	41JR75*	42JR75	43JR75	45JR75	40JR75
10	41JR100	42JR100	43JR100	45JR100	40JR100
12	41JR12R	42JR12R	43JR12R	45JR12R	40JR12R
15	41JR15R	42JR15R*	43JR15R	45JR15R	40JR15R
18	41JR18R*	42JR18R*	43JR18R	45JR18R	40JR18R
20	41JR20R*	42JR20R	43JR20R	45JR20R	40JR20R
22	41JR22R	42JR22R	43JR22R	45JR22R	40JR22R
25	41JR25R*	42JR25R	43JR25R	45JR25R	40JR25R
27	41JR27R*	42JR27R	43JR27R	45JR27R	40JR27R
30	41JR30R*	42JR30R	43JR30R*	45JR30R	40JR30R
33	41JR33R*	42JR33R	43JR33R	45JR33R	40JR33R
35	41JR35R	42JR35R	43JR35R*	45JR35R	40JR35R*
39	41JR39R*	42JR39R	43JR39R	45JR39R	40JR39R*
40	41JR40R*	42JR40R*	43JR40R*	45JR40R	40JR40R
47	41JR47R	42JR47R	43JR47R	45JR47R	40JR47R
50	41JR50R	42JR50R	43JR50R	45JR50R	40JR50R
56	41JR56R	42JR56R	43JR56R	45JR56R	40JR56R
62	41JR62R*	42JR62R	43JR62R*	45JR62R	40JR62R
68	41JR68R	42JR68R	43JR68R	45JR68R	40JR68R*
75	41JR75R	42JR75R	43JR75R	45JR75R	40JR75R
82	41JR82R	42JR82R	43JR82R	45JR82R	40JR82R*
100	41JR100	42JR100	43JR100	45JR100	40JR100
120	41JR120*	42JR120	43JR120	45JR120	40JR120*
125	41JR125	42JR125*	43JR125	45JR125	40JR125
150	41JR150	42JR150	43JR150	45JR150	40JR150
180	41JR180*	42JR180	43JR180	45JR180	40JR180*
200	41JR200	42JR200	43JR200	45JR200	40JR200
220	41JR220	42JR220*	43JR220	45JR220	40JR220
225	41JR225*	42JR225*	43JR225*	45JR225	40JR225*
250	41JR250	42JR250	43JR250	45JR250	40JR250
270	41JR270	42JR270	43JR270*	45JR270	40JR270
300	41JR300	42JR300	43JR300	45JR300	40JR300
330	41JR330*	42JR330	43JR330	45JR330	40JR330
350	41JR350*	42JR350*	43JR350	45JR350	40JR350*
390	41JR390	42JR390	43JR390	45JR390	40JR390
400	41JR400	42JR400*	43JR400	45JR400	40JR400
450	41JR450*	42JR450*	43JR450*	45JR450	40JR450*
470	41JR470	42JR470	43JR470	45JR470	40JR470*
500	41JR500*	42JR500	43JR500	45JR500	40JR500*
560	41JR560	42JR560*	43JR560*	45JR560	40JR560
600	41JR600*	42JR600	43JR600	45JR600	40JR600
680	41JR680	42JR680	43JR680	45JR680	40JR680*
750	41JR750	42JR750*	43JR750	45JR750	40JR750*
800	41JR800*	42JR800	43JR800	45JR800	40JR800*
820	41JR820	42JR820	43JR820	45JR820	40JR820*
900	41JR900*	42JR900*	43JR900	45JR900	40JR900*

*Handling charge extra.

Ohms	1 Watt	2 Watt	3 Watt	5 Watt	10 Watt
1K	41J1K0	42J1K0	43J1K0	45J1K0	40J1K0
1.1K	41J1K1*	42J1K1	43J1K1*	45J1K1	40J1K1*
1.2K	41J1K2*	.....	43J1K2	45J1K2	40J1K2
1.5K	41J1K5	42J1K5	43J1K5	45J1K5	40J1K5
1.8K	41J1K8	.....	43J1K8	45J1K8	40J1K8*
2K	41J2K0*	.....	43J2K0	45J2K0	40J2K0
2.2K	41J2K2*	.....	43J2K2	45J2K2	40J2K2
2.5K	41J2K5	.....	43J2K5	45J2K5	40J2K5
2.7K	41J2K7*	.....	43J2K7	45J2K7	40J2K7*
3K	41J3K0*	42J3K0	43J3K0	45J3K0	40J3K0
3.3K	.....	.....	43J3K3	45J3K3	40J3K3*
3.5K	.....	.....	43J3K5*	45J3K5	40J3K5*
3.9K	.....	.....	43J3K9	45J3K9	40J3K9
4K	.....	.....	43J4K0*	45J4K0	40J4K0*
4.5K	.....	.....	43J4K5*	45J4K5	40J4K5*
4.7K	.....	.....	43J4K7*	45J4K7	40J4K7*
5K	.....	.....	43J5K0	45J5K0	40J5K0
6K	.....	.....	43J6K0	45J6K0	40J6K0*
6.8K	.....	.....	43J6K8	45J6K8	40J6K8*
7K	.....	.....	43J7K0*	45J7K0	40J7K0*
7.5K	.....	.....	43J7K5	45J7K5	40J7K5
8K	.....	.....	43J8K0*	45J8K0	40J8K0*
9K	.....	.....	43J9K0*	45J9K0	40J9K0*
10K	.....	.....	43J10K	45J10K	40J10K

*Handling charge extra.

Values, Ohms	Price Each
1 WATT	
0.1-0.2	\$3.70
0.3-0.75	2.68
1-7.5	1.95
10-470	1.54
500-900	1.69
1K-2.7K	1.73
3K	2.07
2 WATT	
0.1-0.2	\$2.20
0.3-0.75	1.58
1-7.5	1.11
10-470	.93
500-900	1.18
1K-1.5K	1.35
3K	1.65
3 WATT	
0.1-0.2	\$2.02
0.3-0.75	1.45
1-7.5	1.02
10-470	.85
500-900	1.08
1K-2.7K	1.25
3K-4.7K	1.52
5K-10K	1.75
5 WATT	
0.1-0.2	\$2.41
0.3-0.75	1.73
1-7.5	1.21
10-470	1.02
500-900	1.29
1K-2.7K	1.48
3K-4.7K	1.81
5K-10K	2.09
10 WATT	
0.1-0.2	\$2.93
0.3-0.75	2.10
1-7.5	1.46
10-470	1.24
500-900	1.56
1K-2.7K	1.80
3K-4.7K	2.18
5K-10K	2.53

PRICES SHOWN ARE FOR REFERENCE ONLY. PLEASE CALL US FOR CURRENT QUOTES.

MOLDED COMPOSITION POTENTIOMETERS

Available in MIL-R-94 Styles RVAN, RV4L, RV6L, RV6N. High reliability for universal use as rheostats or potentiometers in industrial, military or other high quality electronic devices. All units provide a very large safety factor; overloads of short duration can be safely absorbed. Positive, trouble-free connections assured with terminals molded directly into control elements. Resistance and collector tracks are bridged by a molded composition brush for long life. Noise level is exceedingly low; actually decreases with use of the unit. Various elements of the unit are molded together at one time into a single, integral structure that is sealed against moisture. A metal cover is sealed to the element to electrically shield the internal parts; a synthetic resin is the sealing agent with non-mercurial fungicide to assure dust-tight, splash-proof and fungus resistant safety. Molding method permits predetermination of resistance-rotation characteristics to such a fine degree that ideal curves are followed quite closely. Thus, a single element with a smoothly graduated resistance change produces modified logarithmic tapers in AB units. **Type AB Controls:** Rated 2 watts at 70°C; 500 volts, rms, 60-Hz max. continuous across resistance elements; 1000 V rms for 1 sec., high potential test. Size, 1½" dia. Available in Style CMU, single control with a ¾" slotted shaft, linear taper, MIL Style RV4N; Style CU single control with 2" unslotted shaft, linear taper; Style CA clockwise modified log taper version of CU; Style CB, counter-clockwise modified log taper version of CU; Style CLU single control with locking-type shaft, linear taper MIL Style RV4L; and Style CCU dual control with 2" shaft, slotted for screwdriver with collect bushing and conical nut; linear taper, MIL Style RV6L; or ¾" lg. shaft for knob control, standard bushing MIL Style RV6N. **Operating Temperature:** -55°C to +120°C, derate linearly from full rating at +70°C to zero at +120°C, for linear taper; other tapers, multiply rating obtained for linear taper by 0.5. **Humidity and Corrosion:** Temporary resistance changes less than 5% after exposure for 100 hours at 40°C to 95% relative humidity. Meets 200 hr. salt spray corrosion test QQ-M-151, military specification. **Rotation:** 312° ±3°, Type AB without on-off switch; 333° ±3°, with switch. Type AS, 295° ±5°.



AB; CA,
CB, CU



CLU



CMU

Mfr. No.	Description	Price Each
CMU	¾" shaft, sgle. MIL	\$ 6.66
CU	2" shaft, linear	6.87
CA	2" shaft, CW log	6.87
CB	2" shaft, CCW log	6.87
CLU	Locking shaft, MIL	6.93
CCU	Dual locking shaft	13.94

Mfr. No.	Description	Price Each
AS	Locking shaft, min., MIL	\$7.30
ASM	¾" knob shaft, MIL	6.87

STOCK VALUES

MIL units are stamped with MIL and commercial designations.

Resistance Ohms ±10%	Type AB (1½" Dia.)								Type AS (½" Dia.)			
	Single, ¾" Shaft		Single Unit 2" Shaft			Locking		Dual	Min. Locking		Min. ¾" Shaft	
	Style CMU Linear	MIL Design. RV4NAY	Style CU Linear	Style CA CW log	Style CB CCW log	Style CLU Linear	MIL Design. RV4LAY-	Style CCU Linear	Style AS Linear	MIL Design. RV6LAY-	Style ASM Linear	MIL Design. RV6NAY-
50	CMU5001	SD500A	CU5001	.....	.....	CLU5001	SA500A	.....	.....	.....	ASM6661	SD101A
100	CMU1011	SD101A	CU1011	.....	.....	CLU1011	SA101A	.....	AS3601	SA101A	.....	.....
150	CMU1511	SD151A	CU1511	.....	.....	CLU1511	SA151A	.....	.....	SA251A	ASM6662	SD251A
250	CMU2511	SD251A	CU2511	.....	.....	CLU2511	SA251A	.....	AS3602	.....	.....	.....
350	CMU3511	SD351A	CU3511	.....	.....	CLU3511	SA351A	.....	.....	SA501A	ASM6663	SD501A
500	CMU5011	SD501A	CU5011	.....	.....	CLU5011	SA501A	.....	AS3603	.....	.....	.....
750	CMU7511	SD751A	CU7511	.....	.....	CLU7511	SA751A	.....	.....	SA102A	ASM6664	SD102A
1,000	CMU1021	SD102A	CU1021	.....	.....	CLU1021	SA102A	.....	AS3604	.....	.....	.....
1,500	CMU1521	SD152A	CU1521	.....	.....	CLU1521	SA152A	.....	.....	SA252A	ASM6665	SD252A
2,500	CMU2521	SD252A	CU2521	.....	.....	CLU2521	SA252A	.....	AS3605	.....	.....	.....
3,500	CMU3521	SD352A	CU3521	.....	.....	CLU3521	SA352A	.....	.....	SA502A	ASM6666	SD502A
5,000	CMU5021	SD502A	CU5021	.....	.....	CLU5021	SA502A	.....	AS3606	.....	.....	.....
7,500	CMU7521	SD752A	CU7521	.....	.....	CLU7521	SA752A	.....	.....	SA103A	ASM6667	SD103A
10,000	CMU1031	SD103A	CU1031	.....	CB1031	CLU1031	SA103A	CCU1031†	AS3607	.....	.....	.....
15,000	CMU1531	SD153A	CU1531	.....	.....	CLU1531	SA153A	.....	.....	SA253A	ASM6668	SD253A
25,000	CMU2531	SD253A	CU2531	.....	CB2531	CLU2531	SA253A	CCU2531†	AS3608	.....	.....	.....
35,000	CMU3531	SD353A	CU3531	.....	.....	CLU3531	SA353A	.....	.....	SA503A	ASM6669	SD503A
50,000	CMU5031	SD503A	CU5031	.....	CB5031	CLU5031	SA503A	CCU5031†	AS3609	.....	.....	.....
75,000	CMU7531	SD753A	CU7531	.....	.....	CLU7531	SA753A	.....	.....	SA104A	ASM6670	SD104A
.1 meg	CMU1041	SD104A	CU1041	CA1041	.....	CLU1041	SA104A	CCU1041†	AS3610	.....	.....	.....
.15 meg	CMU1541	SD154A	CU1541	.....	.....	CLU1541	SA154A	.....	.....	SA254A	ASM6671	SD254A
.25 meg	CMU2541	SD254A	CU2541	CA2541	.....	CLU2541	SA254A	CCU2541†	AS3611	.....	.....	.....
.35 meg	CMU3541	SD354A	CU3541	.....	.....	CLU3541	SA354A	.....	.....	SA504A	ASM6672	SD504A
.5 meg	CMU5041	SD504A	CU5041	CA5041	.....	CLU5041	SA504A	CCU5041†	AS3612	.....	.....	.....
.75 meg*	CMU7542	SD754A	CU7542	.....	.....	CLU7542	SA754A	.....	.....	SA105B	ASM6673	SD105B
1.0 meg*	CMU1052	SD105B	CU1052	CA1052	.....	CLU1052	SA105A	CCU1052†	AS3613	.....	.....	.....
1.5 meg*	CMU1552	SD155B	CU1552	.....	.....	CLU1552	SA155B	.....	.....	SA205B	ASM6674	SD205B
2.0 meg*	CMU2052	SD205B	CU2052	.....	.....	CLU2052	SA205B	.....	AS3684	.....	.....	.....
2.5 meg*	CMU2552	SD255B	CU2552	CA5582	.....	CLU2552	SA255B	.....	AS3614	.....	ASM6675	SD255B
3.5 meg*	CMU3552	SD355B	CU3552	.....	.....	CLU3552	SA355B	.....	.....	.....	.....	.....
5.0 meg*	CMU5052	SD505B	CU5052	.....	.....	CLU5052	SA505B	.....	AS3615	SA505B	ASM6676	SD505B

* ±20% tolerance. †Resistance shown is for each unit.

THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS
WE HAVE AVAILABLE. PLEASE
CONTACT US FOR ADDITIONAL PRODUCT INFORMATION.

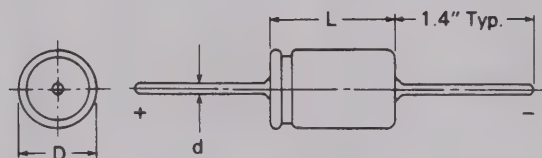
SERIES CAE ELECTROLYTIC CAPACITORS

Type	Value μF	Rating WVDC	Max. ESR Ohms	Case Code	Price Per Pack
CAE1056*	33	10	8.0	A	\$1.73
CAE1057*	47	10	5.7	A	1.73
CAE1059*	100	10	2.7	C	1.85
CAE1061*	220	10	1.2	D	1.73
CAE1062*	330	10	0.80	D	1.73
CAE1064*	470	10	0.57	E	1.85
CAE1068	1000	10	0.27	G	1.73
CAE1070	2200	10	0.13	J	2.87
CAE1071	3300	10	0.10	K	3.04
CAE1072	4700	10	0.07	L	3.76
CAE1095*	22	16	10.3	A	1.73
CAE1096*	33	16	6.8	A	1.85
CAE1097*	47	16	4.8	B	1.85
CAE1099*	100	16	2.3	C	2.31
CAE1101	220	16	1.0	D	1.73
CAE1102	330	16	0.68	E	2.09
CAE1104	470	16	0.48	F	2.48
CAE1108	1000	16	0.23	H	3.04
CAE1110	2200	16	0.12	K	4.63
CAE1111	3300	16	0.08	L	6.36
CAE1112	4700	16	0.07	M	6.36
CAE1133*	10	25	20	A	1.73
CAE1135*	22	25	9.1	A	1.73
CAE1136*	33	25	6	B	1.85
CAE1137*	47	25	4.2	C	1.85
CAE1139*	100	25	2	D	2.31
CAE1141	220	25	0.91	E	1.73
CAE1142	330	25	0.60	F	2.09
CAE1144	470	25	0.42	G	2.87
CAE1148	1000	25	0.20	J	3.04
CAE1150	2200	25	0.10	L	5.40
CAE1151	3300	25	0.08	M	6.36
CAE1173*	10	35	16	A	1.73
CAE1175	22	35	7.2	B	1.73
CAE1176*	33	35	4.8	C	1.85
CAE1177*	47	35	3.4	D	1.73
CAE1179*	100	35	1.6	E	1.85
CAE1181	220	35	0.72	F	1.73
CAE1182	330	35	0.48	G	2.09
CAE1184	470	35	0.34	H	2.31
CAE1188	1000	35	0.16	K	3.04
CAE1190	2200	35	0.08	L	5.40
CAE1207*	1	50	130	A	1.73
CAE1209*	2.2	50	60	A	1.73
CAE1210*	3.3	50	40	A	1.73
CAE1211*	4.7	50	28	A	1.73
CAE1213*	10	50	13	B	1.85
CAE1215*	22	50	6	C	1.85
CAE1216*	33	50	4	D	1.85
CAE1217*	47	50	2.8	D	2.48
CAE1219	100	50	1.3	E	1.85
CAE1221	220	50	0.60	G	2.48
CAE1222	330	50	0.40	H	3.04
CAE1224	470	50	0.28	J	3.04
CAE1228	1000	50	0.13	L	5.40
CAE1244*	0.33	63	400	A	1.73
CAE1245*	0.47	63	280	A	1.73
CAE1247*	1	63	130	A	1.73
CAE1249*	2.2	63	60	A	1.73
CAE1250*	3.3	63	40	A	1.73
CAE1251*	4.7	63	30	B	1.73
CAE1253*	10	63	13	C	1.85
CAE1255*	22	63	6	D	2.09
CAE1256*	33	63	4	D	2.09
CAE1257*	47	63	2.8	E	2.48
CAE1259	100	63	1.3	F	2.09
CAE1261	220	63	0.60	H	3.36
CAE1262	330	63	0.40	J	4.63
CAE1264	470	63	0.28	K	5.40
CAE1268	1000	63	0.13	M	6.36

*2 per pack

Type	Value μF	Rating WVDC	Max. ESR Ohms	Case Code	Price Per Pack
CAE1327*	1	100	100	A	\$1.85
CAE1329*	2.2	100	50	A	1.85
CAE1330*	3.3	100	30	A	1.85
CAE1331*	4.7	100	20	B	2.09
CAE1333*	10	100	10	D	2.31
CAE1335*	22	100	4.8	E	2.87
CAE1336	33	100	3.2	E	2.31
CAE1337	47	100	2.3	F	2.87
CAE1339	100	100	1.0	H	3.76
CAE1341	220	100	0.48	K	6.36
CAE1342	330	100	0.32	L	6.36
CAE1367	1	160	160	C	1.73
CAE1369	2.2	160	70	D	1.73
CAE1370	3.3	160	50	D	1.85
CAE1371	4.7	160	34	E	2.09
CAE1373	10	160	16	G	2.48
CAE1375	22	160	7.2	H	2.87
CAE1376	33	160	4.8	J	3.04
CAE1377	47	160	3.4	K	3.04
CAE1379	100	160	1.6	L	5.40
CAE1447	1	250	160	D	1.85
CAE1449	2.2	250	72	D	1.73
CAE1450	3.3	250	50	D	2.31
CAE1451	4.7	250	34	F	1.85
CAE1453	10	250	16	H	2.48
CAE1455	22	250	7.2	J	3.36
CAE1456	33	250	4.8	K	4.63
CAE1457	47	250	3.4	L	6.36
CAE1459	100	250	1.6	M	6.36
CAE1527*	1	350	320	D	2.09
CAE1529	2.2	350	145	F	1.73
CAE1530	3.3	350	100	F	1.85
CAE1531	4.7	350	70	G	2.09
CAE1533	10	350	30	J	3.04
CAE1535	22	350	15	L	3.04
CAE1536	33	350	10	M	6.36

*2 per pack



Case Code	Diameter (D) (in.)	Length (L) (in.)	Lead Diameter (d) (in.)
A	0.217	0.531	0.024
B	0.268	0.531	0.024
C	0.268	0.669	0.024
D	0.335	0.669	0.024
E	0.335	0.826	0.024
F	0.414	0.866	0.024
G	0.414	1.063	0.024
H	0.532	1.063	0.024
J	0.532	1.319	0.024
K	0.650	1.319	0.031
L	0.650	1.654	0.031
M	0.729	1.654	0.031

All dimensions ± 20%

Operating Temperature

10 to 100 WVDC -40°C to 85°C

160 to 350 WVDC -25°C to 85°C

Storage Temperature 85°C Max.

Tolerance ± 10%

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.

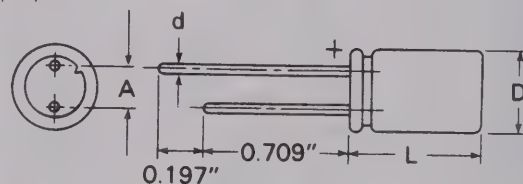
SERIES CRE ELECTROLYTIC CAPACITORS

Type	Value μF	Rating WVDC	Max. ESR Ohms	Case Code	Price per Pack
CRE2024	470	6.3	0.68	D	\$1.85
CRE2028	1000	6.3	0.32	F	1.73
CRE2030	2200	6.3	0.16	J	2.09
CRE2031	3300	6.3	0.11	L	2.87
CRE2032	4700	6.3	0.09	M	3.76
CRE2055	22	10	1	A	1.73
CRE2056	33	10	8	A	1.73
CRE2057	47	10	5.7	A	1.73
CRE2059	100	10	2.7	B	1.73
CRE2061	220	10	1.2	C	1.73
CRE2062	330	10	0.80	E	1.73
CRE2064	470	10	0.57	F	1.73
CRE2078	1000	10	0.27	H	1.73
CRE2070	2200	10	0.13	K	2.48
CRE2071	3300	10	0.10	M	3.36
CRE2072	4700	10	0.07	N	3.76
CRE2093*	10	16	23	A	1.73
CRE2095*	22	16	10	A	1.73
CRE2096*	33	16	7	A	1.73
CRE2097*	47	16	4.8	B	1.73
CRE2099*	100	16	2.3	C	2.31
CRE2101*	220	16	1	E	2.48
CRE2102	330	16	0.68	F	1.85
CRE2104	470	16	0.48	G	2.31
CRE2108	1000	16	0.23	H	3.04
CRE2110	2200	16	0.12	L	4.63
CRE2111	3300	16	0.08	N	6.36
CRE2112	4700	16	0.07	P	6.36
CRE2133*	10	25	20	A	1.73
CRE2135*	22	25	9.1	A	1.73
CRE2136*	33	25	6	B	1.73
CRE2137*	47	25	4.2	B	1.73
CRE2139*	100	25	2	C	2.31
CRE2141	220	25	0.91	F	1.73
CRE2142	330	25	0.60	G	2.09
CRE2144	470	25	0.42	H	2.48
CRE2148	1000	25	0.20	J	3.04
CRE2150	2200	25	0.10	N	4.63
CRE2171*	4.7	35	34	A	1.73
CRE2173*	10	35	16	A	1.73
CRE2175*	22	35	7.2	B	1.73
CRE2176*	33	35	4.8	B	1.73
CRE2177*	47	35	3.4	C	1.73
CRE2179*	100	35	1.6	E	1.73
CRE2181	220	35	0.72	G	1.73
CRE2182	330	35	0.48	H	1.73
CRE2184	470	35	0.34	J	1.85
CRE2188	1000	35	0.16	L	2.87
CRE2190	2200	35	0.08	P	4.63
CRE2205*	47	50	280	A	1.73
CRE2207*	1	50	130	A	1.73
CRE2209*	2.2	50	60	A	1.73
CRE2210*	3.3	50	40	A	1.73
CRE2211*	4.7	50	28	A	1.73
CRE2213*	10	50	13	A	1.73
CRE2215*	22	50	6	B	1.73
CRE2216*	33	50	4	C	2.09
CRE2217*	47	50	2.8	C	2.09
CRE2219	100	50	1.3	F	1.73
CRE2221	220	50	0.60	H	2.48
CRE2222	330	50	0.40	H	3.04
CRE2224	470	50	0.28	L	3.04
CRE2228	1000	50	0.13	M	4.63
CRE2245*	47	63	280	A	1.73
CRE2247*	1.0	63	130	A	1.73
CRE2249*	2.2	63	60	A	1.73
CRE2250*	3.3	63	40	A	1.73
CRE2251*	4.7	63	28	A	1.73
CRE2253*	10	63	13	B	1.85
CRE2255*	22	63	6	C	2.09
CRE2256*	33	63	4	C	2.09
CRE2257*	47	63	2.8	E	2.48
CRE2259	100	63	1.3	G	2.09
CRE2261	220	63	0.60	H	3.04
CRE2262	330	63	0.40	J	4.63
CRE2264	470	63	0.28	L	5.40
CRE2268	1000	63	0.13	P	6.36

*2 per pack.

Type	Value μF	Rating WVDC	Max. ESR Ohms	Case Code	Price per Pack
CRE2321*	.10	100	1060	A	\$1.73
CRE2323*	.22	100	480	A	2.87
CRE2324*	.33	100	320	A	1.73
CRE2325*	.47	100	226	A	1.73
CRE2327*	1	100	106	A	1.85
CRE2329*	2.2	100	48	A	1.85
CRE2330*	3.3	100	32	A	1.85
CRE2331*	4.7	100	23	B	1.85
CRE2333*	10	100	11	C	1.85
CRE2335*	22	100	4.8	E	2.31
CRE2336	33	100	3.2	F	2.87
CRE2337	47	100	2.3	G	2.31
CRE2339	100	100	1.1	H	2.87
CRE2341	220	100	0.48	L	3.76
CRE2367*	1	160	160	C	6.36
CRE2369*	2.2	160	72	C	2.87
CRE2370*	3.3	160	48	D	2.87
CRE2371*	4.7	160	34	D	2.87
CRE2373	10	160	16	G	1.85
CRE2375	22	160	7.2	H	1.85
CRE2376	33	160	4.8	J	2.09
CRE2377	47	160	3.4	L	2.31
CRE2379	100	160	1.6	P	4.63
CRE2447	1	250	160	C	2.09
CRE2449	2.2	250	72	C	2.09
CRE2450	3.3	250	48	D	2.09
CRE2451	4.7	250	34	D	2.09
CRE2453	10	250	16	G	2.31
CRE2455	22	250	7.2	H	2.48
CRE2456	33	250	4.8	L	2.48
CRE2457	47	250	3.4	M	2.87
CRE2527	1	350	320	D	2.48
CRE2529	2.2	350	145	F	2.48
CRE2530	3.3	350	96	G	2.48
CRE2531	4.7	350	68	H	2.48
CRE2533	10	350	32	J	2.87
CRE2535	22	350	14	M	2.87
CRE2536	33	350	9.7	P	3.76
CRE2607	1	450	320	F	1.85
CRE2609	2.2	450	145	G	2.09
CRE2610	3.3	450	96	H	2.31
CRE2611	4.7	450	68	J	2.87
CRE2613	10	450	32	M	3.76
CRE2615	22	450	14	R	5.40

*2 per pack.



Case Code	Diameter (D) (in.)	Length (L) (in.)	Lead Spacing (A) (in.)	Lead Diameter (d) (in.)
A	0.217	0.472	0.979	0.020
B	0.268	0.472	0.098	0.020
C	0.335	0.492	0.138	0.020
D	0.335	0.669	0.138	0.020
E	0.414	0.571	0.197	0.024
F	0.414	0.700	0.197	0.024
G	0.414	0.866	0.197	0.024
H	0.532	0.866	0.197	0.024
J	0.532	1.063	0.197	0.024
K	0.650	0.866	0.295	0.031
L	0.650	1.063	0.295	0.031
M	0.650	1.319	0.295	0.031
N	0.650	1.477	0.295	0.031
P	0.729	1.477	0.295	0.031
R	0.729	1.654	0.295	0.031

All dimensions ± 20%.

Operating Temperature

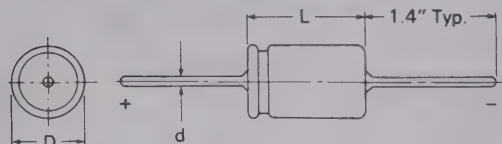
6.3 to 100 WVDC -40°C to 85°C

160 to 450 WVDC -25°C to 85°C

Storage Temperature 85°C Max.

Tolerance ± 10%

SERIES CAE NON-POLARIZED



Operating Temperature	—40°C to 85°C
Storage Temperature	85°C Max.
Tolerance	±20%
Dissipation Factor	
25 V Types	0.17
50 V Types	0.15
Surge Voltage	
25 V Types	32 V
50 V Types	63 V

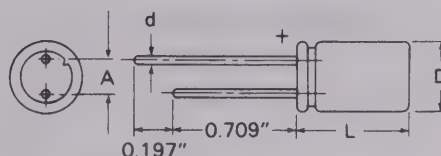
Type	Value μF	Case Code	Price Each
25 V TYPES			
CAE1131NP	4.7	A	\$1.85
CAE1133NP	10	B	1.85
CAE1135NP	22	B	2.09
CAE1136NP	33	C	2.31
CAE1137NP	47	E	2.31
CAE1139NP	100	F	2.31
CAE1141NP	220	F	2.48
CAE1142NP	330	B	2.87

50 V TYPES			
CAE1205NP	0.47	A	\$2.09
CAE1207NP	1	A	2.31
CAE1209NP	2.2	A	2.31
CAE1210NP	3.3	A	2.31
CAE1211NP	4.7	B	2.31
CAE1213NP	10	B	2.48
CAE1215NP	22	D	2.48
CAE1216NP	33	D	4.63
CAE1217NP	47	E	4.63
CAE1219NP	100	F	5.40

Case Code	Diameter (D) (In.)	Length (L) (In.)	Lead Diameter (D) (In.)
A	0.248	0.787	.024
B	0.315	0.787	.024
C	0.394	0.984	.024
D	0.394	1.240	.024
E	0.512	1.240	.024
F	0.630	1.240	.031
G	0.630	1.575	.031

All dimensions ±20%.

SERIES CRE NON-POLARIZED



Operating Temperature	—40°C to 85°C
Storage Temperature	85°C Max.
Tolerance	±20%

Dissipation Factor	
25 V Types	0.17
50 V Types	0.15

Surge Voltage	
25 V Types	32 V
50 V Types	63 V

Type	Value μF	Case Code	Price Each
25 V TYPES			
CRE2131NP	4.7	A	\$1.85
CRE2133NP	10	A	1.85
CRE2135NP	22	B	2.09
CRE2136NP	33	C	2.31
CRE2137NP	47	D	2.31
CRE2139NP	100	E	2.31
CRE2141NP	220	G	2.48

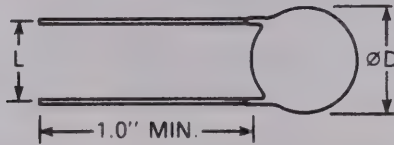
50 V TYPES			
CRE2205NP	0.47	A	\$1.85
CRE2207NP	1	A	1.85
CRE2209NP	2.2	A	1.85
CRE2210NP	3.3	A	1.85
CRE2211NP	4.7	B	1.85
CRE2213NP	10	B	2.09
CRE2215NP	22	D	2.09
CRE2216NP	33	E	2.48
CRE2217NP	47	F	2.48
CRE2219NP	100	G	2.87

Case Code	Diameter (D) (In.)	Length (L) (In.)	Lead Spacing (A) (In.)	Lead Diameter (D) (In.)
A	0.197	0.433	0.079	.020
B	0.248	0.433	0.098	.020
C	0.315	0.453	0.138	.020
D	0.394	0.492	0.197	.024
E	0.394	0.630	0.197	.024
F	0.394	0.787	0.197	.024
G	0.512	0.787	0.197	.024

All dimensions ±20%.

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REQUIREMENTS FOR INDUSTRIAL ELECTRONIC EQUIPMENT AND
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FAST DELIVERY AND PRODUCTION QUANTITY PRICING. CALL
FOR INFORMATION ON NEW OR UNLISTED ITEMS.**

SERIES CRD CERAMIC DISK CAPACITORS



Type	Value	Temp. Char.	Case Code	Price Each
50 V TYPES				
CRD4181	5000.0 pF	Z5V	A	\$1.32
CRD4187	0.01 μ F	Z5V	B	1.32
CRD4192	0.022 μ F	Z5V	C	1.32
CRD4195	0.033 μ F	Z5V	E	1.32
CRD4198	0.05 μ F	Z5V	E	1.73
CRD4200	0.10 μ F	Z5V	J	1.73

1000 V TYPES				
CRD4408	3.3 pF	S2L	B	\$1.32
CRD4410	5 pF	S2L	B	1.32
CRD4413	6 pF	S2L	B	1.32
CRD4414	6.8 pF	S2L	B	1.32
CRD4415	7.5 pF	S2L	B	1.32
CRD4416	8 pF	S2L	B	1.32
CRD4419	10 pF	S2L	B	1.32
CRD4420	12 pF	S2L	B	1.32
CRD4422	15 pF	S2L	B	1.32
CRD4423	18 pF	S2L	B	1.32
CRD4424	20 pF	S2L	B	1.32
CRD4425	22 pF	S2L	B	1.32
CRD4427	25 pF	S2L	B	1.32
CRD4428	27 pF	S2L	B	1.32
CRD4429	30 pF	S3N	B	1.32
CRD4430	33 pF	S3N	B	1.32
CRD4432	39 pF	S3N	B	1.32
CRD4433	47 pF	S3N	B	1.32
CRD4434	50 pF	S3N	B	1.32
CRD4436	56 pF	S3N	B	1.32
CRD4437	68 pF	S3N	B	1.32
CRD4438	75 pF	S3N	B	1.32
CRD4440	82 pF	S3N	B	1.32
CRD4441	91 pF	S3N	B	1.32
CRD4442	100 pF	S3N	B	1.32
CRD4443	120 pF	S3N	B	1.32
CRD4444	130 pF	S3N	B	1.32
CRD4445	150 pF	S3N	B	1.32
CRD4446	180 pF	S3N	B	1.32
CRD4447	200 pF	S3N	B	1.32
CRD4448	220 pF	Z5F	B	1.32
CRD4450	250 pF	Z5F	B	1.32
CRD4451	270 pF	Z5F	B	1.32
CRD4452	300 pF	Z5F	B	1.32
CRD4453	330 pF	Z5F	B	1.32
CRD4455	390 pF	Z5F	B	1.32
CRD4456	470 pF	Z5F	B	1.32
CRD4457	500 pF	Z5F	B	1.32
CRD4459	560 pF	Z5F	B	1.32
CRD4460	680 pF	Z5R	B	1.32
CRD4461	750 pF	Z5R	B	1.32
CRD4463	820 pF	Z5U	B	1.32
CRD4464	910 pF	Z5U	B	1.32
CRD4465	1000 pF	Z5F	C	1.73
CRD4466	1200 pF	Z5R	C	1.73
CRD4468	1500 pF	Z5F	C	1.73
CRD4470	1800 pF	Z5U	C	1.73

Type	Value	Temp. Char.	Case Code	Price Each
1000 V TYPES (CONT'D)				
CRD4471	2000 pF	Z5U	C	\$1.73
CRD4472	2200 pF	Z5U	C	1.73
CRD4473	2500 pF	Z5U	C	1.73
CRD4474	2700 pF	Z5U	C	1.73
CRD4475	3000 pF	Z5U	C	1.73
CRD4476	3300 pF	Z5U	E	1.73
CRD4477	3900 pF	Z5U	E	1.73
CRD4479	4300 pF	Z5U	E	1.73
CRD4480	4700 pF	Z5U	E	1.73
CRD4481	5000 pF	Z5U	E	1.73
CRD4482	5600 pF	Z5U	H	1.73
CRD4483	6800 pF	Z5U	H	1.73
CRD4484	7500 pF	Z5U	H	1.73
CRD4485	8200 pF	Z5U	H	1.73
CRD4487	0.01 μ F	Z5U	H	2.09

3000 V TYPE				
CRD4640	82 pF	Z5U	C	\$2.31
CRD4642	100 pF	Z5U	C	3.36
CRD4643	120 pF	Z5U	C	3.36
CRD4645	150 pF	Z5U	C	3.36
CRD4649	240 pF	Z5U	C	3.36
CRD4652	300 pF	Z5U	C	3.36
CRD4653	330 pF	Z5U	C	3.36
CRD4656	470 pF	Z5U	D	3.36
CRD4665	1000 pF	Z5U	D	4.63
CRD4670	1800 pF	Z5U	E	4.63
CRD4672	2200 pF	Z5U	F	4.63
CRD4680	4700 pF	Z5U	J	4.63
CRD4687	0.01 μ F	Z5U	K	5.40

TEMPERATURE CHARACTERISTICS

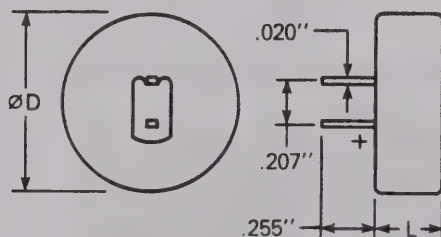
Rating	Temp. Range (°C)	Max. Δ Cap.
S2L	+25 to +85	N330 $\pm$ 500 ppm/°C
S3N	+25 to +85	N3300 $\pm$ 2500 ppm/°C
Z5F	+10 to +85	$\pm$ 7.5%
Z5R	+10 to +85	$\pm$ 15%
Z5U	+10 to +85	+22%, -56%
Z5U	+10 to +85	+22%, -82%

Encapsulation Phenolic Coated,
Wax Impregnated

Case Code	Diameter (D) (in.)	Lead Spacing (L) (in.)
A	0.260	0.250
B	0.290	0.250
C	0.375	0.250
D	0.355	0.250
E	0.415	0.375
F	0.475	0.375
G	0.495	0.375
H	0.590	0.375
J	0.670	0.375
K	0.910	0.375

Max. thickness for 50 V and 1000 V types is 0.156". Max. thickness for 3000 V types 0.250".

SERIES CMB MEMORY BACK-UP CAPACITORS



Operating Environment -25°C to +70°C
90% to 95% RH Max.
Tolerance -20% to +80%

Type	Value (F)	Inflow Current (μ A)	Case Code	Price Each
CMB9001	0.033	57	A	\$12.39
CMB9002	0.047	69	A	12.39
CMB9003	0.1	100	A	15.22
CMB9004	0.33	182	B	26.12
CMB9005	0.47	216	B	29.40
CMB9006	1	315	B	35.22

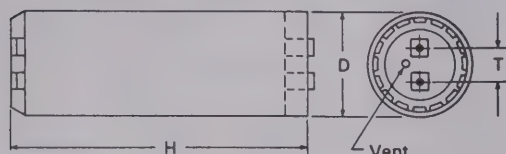
Inflow current will decrease to less than 10 μ A (typ) after 10 hours of operation at rated voltage.

Case Code	Diameter (D) (in.)	Length (L) (in.)
A	0.530	0.295
B	0.845	0.315

All dimensions $\pm$ 20%.

**THROUGH OUR BUYING GROUP ASSOCIATION WITH EDBA WE CAN OFFER
YOU ACCESS TO MANY LINES NOT SHOWN IN THIS CATALOG.**

SERIES CMS AC MOTOR START CAPACITORS



Overvoltage 140% of rated voltage at ambient temperature
 Case Insulation 1500 Vrms (a 60 Hz for 5 seconds between terminals and case)
 Operating Temperature-40°C to +65°C
 Storage Temperature-55°C to +95°C
 Operating Frequency Range 47 to 63 Hz

Type	Capacitance μF (Min-Max)	Case Style	Price Each
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125 VAC RATINGS

CMS101	21-25	MS1	\$ 4.87
CMS102	25-30	MS1	4.94
CMS103	30-36	MS1	5.01
CMS104	36-43	MS1	5.44
CMS105	43-53	MS1	5.51
CMS107	53-64	MS1	5.72
CMS108	72-88	MS1	6.06
CMS109	88-108	MS1	6.20
CMS110	108-130	MS1	6.31
CMS111	124-149	MS1	6.66
CMS113	147-175	MS1	7.46
CMS114	161-193	MS1	7.53
CMS115	189-227	MS1	7.58
CMS117	216-259	MS2	7.67
CMS118	233-280	MS2	7.72
CMS120	270-324	MS2	8.27
CMS121	340-408	MS4	10.10
CMS123	400-480	MS4	11.21
CMS125	460-552	MS4	14.01
CMS127	590-708	MS5A	15.25
CMS129	829-995	MS7	20.00

Type	Capacitance μF (Min-Max)	Case Style	Price Each
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250 VAC RATINGS

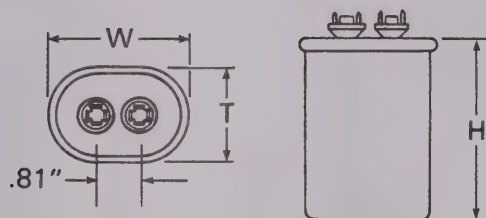
CMS201	21-25	MS1	\$ 7.88
CMS202	25-30	MS1	8.50
CMS203	30-36	MS1	8.84
CMS204	36-43	MS2	9.18
CMS205	43-53	MS2	9.64
CMS207	53-64	MS2	11.25
CMS208	72-88	MS4	12.01
CMS209	88-108	MS4	12.47
CMS210	108-130	MS4	13.96
CMS211	124-149	MS4	14.97
CMS212	130-156	MS4	16.42
CMS213	145-175	MS6	17.70
CMS214	161-193	MS5B	18.97
CMS215	189-227	MS7	19.56
CMS216	233-280	MS7	24.04
CMS217	270-324	MS7	27.14

330 VAC RATINGS

CMS301	21-25	MS2	\$11.02
CMS302	25-30	MS2	11.18
CMS303	30-36	MS4	12.03
CMS304	36-43	MS4	12.70
CMS305	43-53	MS4	13.20
CMS307	53-64	MS4	14.17
CMS309	72-88	MS5A	17.04
CMS310	88-108	MS6	18.37
CMS311	108-130	MS7	22.07
CMS312	124-149	MS7	25.17
CMS313	145-174	MS8	27.19
CMS314	161-193	MS8	29.07
CMS315	189-227	MS8	33.30
CMS316	216-259	MS8	34.79

Case Style	Case Size		Terminals
	D	H	T
MS1	1.438	2.750	0.500
MS2	1.438	3.375	0.500
MS4	1.813	3.375	0.625
MS5A	1.813	4.375	0.625
MS5B	1.813	4.375	0.813
MS6	2.063	3.375	0.813
MS7	2.063	4.375	0.813
MS8	2.563	4.375	0.813

SERIES CMR AC MOTOR RUN CAPACITORS



Operating Temperature Range-55°C to +70°C
 Dissipation Factor 0.2%

Capacitance Change Due to Temperature+5% to -7%
 Service Life (a Max Rating 150,000 hours (typ)
 Terminal Center to Center Dimension 0.81"

Type	Capacitance μF	Case Dimensions			Price Each
		W	T	H	

370 VAC RATINGS AND DIMENSIONS (IN.)

CMR400	2	2.16	1.31	2.00	\$11.55
CMR401	3	2.16	1.31	2.00	11.57
CMR402	4	2.16	1.31	2.00	11.95
CMR403	5	2.16	1.31	2.00	11.97
CMR404	6	2.16	1.31	2.00	13.38
CMR405	7.5	2.16	1.31	2.00	15.46
CMR406	10	2.16	1.31	2.50	19.53
CMR407	12.5	2.16	1.31	2.75	22.90
CMR408	15	2.16	1.31	3.00	25.70
CMR409	17.5	2.16	1.31	3.50	27.14
CMR410	20	2.16	1.31	4.00	28.95
CMR411	25	2.91	1.91	2.75	32.16
CMR412	30	2.91	1.91	3.25	38.31
CMR413	35	2.91	1.91	3.50	40.16
CMR414	40	3.66	1.97	3.25	46.12
CMR415	45	3.66	1.97	3.50	49.79
CMR416	50	3.66	1.97	3.75	53.44

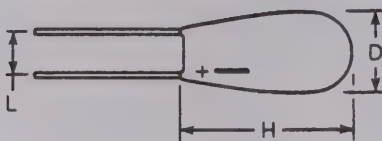
Type	Capacitance μF	Case Dimensions			Price Each
		W	T	H	

400 VAC RATINGS AND DIMENSIONS (IN.)

CMR500	2	2.16	1.31	2.00	\$12.08
CMR501	3	2.16	1.31	2.00	12.49
CMR502	4	2.16	1.31	2.00	13.56
CMR503	5	2.16	1.31	2.00	15.37
CMR504	6	2.16	1.31	2.00	16.61
CMR505	7.5	2.16	1.31	2.25	19.74
CMR506	10	2.16	1.31	2.75	23.81
CMR508	15	2.16	1.31	3.75	30.68
CMR510	20	2.91	1.91	2.75	35.96
CMR511	25	2.91	1.91	3.25	42.22
CMR512	30	2.91	1.91	3.75	46.48
CMR513	35	3.66	1.97	3.25	53.23
CMR514	40	3.66	1.97	3.50	53.87
CMR515	45	3.66	1.97	4.00	58.02
CMR516	50	3.66	1.97	4.25	62.61
CMR517	55	3.66	1.97	4.50	66.95
CMR518	60	3.66	1.97	4.75	89.28

**WE ARE BETTER ABLE TO SERVICE YOUR NEEDS BY
 BELONGING TO EDPA, A NATIONAL BUYING GROUP.**

SERIES CTR TANTALUM CAPACITORS



- Low leakage current
- Wide temperature range
- Stable performance

Operating Temperature -55° to +125°C
Tolerance ±20%

Type	Value (μF)	Case Code	Price Each
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6.3 V TYPES

CTR3036	6.8	C	\$ 2.31
CTR3037	10	D	2.87
CTR3039	22	F	3.04
CTR3041	47	I	5.40

10 V TYPES

CTR3058	2.2	B	\$ 1.85
CTR3059	3.3	B	1.85
CTR3060	4.7	C	2.09
CTR3061	6.8	D	2.31
CTR3062	10	E	2.87
CTR3063	15	F	3.36
CTR3064	22	H	3.76
CTR3065	33	I	4.63
CTR3066	47	K	5.40
CTR3067	68	L	6.36
CTR3068	100	M	11.82

16 V TYPES

CTR3083	2.2	B	\$ 1.85
CTR3084	3.3	C	1.85
CTR3085	4.7	D	2.31
CTR3086	6.8	E	2.48
CTR3087	10	G	3.04
CTR3088	15	I	3.36
CTR3089	22	J	4.63
CTR3090	33	K	5.40
CTR3091	47	L	6.36
CTR3092	68	M	8.66
CTR3093	100	N	11.82

25 V TYPES

CTR3131	1	B	\$ 1.85
CTR3132	1.5	B	2.09
CTR3133	2.2	C	2.09
CTR3134	3.3	D	2.31
CTR3135	4.7	E	2.31
CTR3136	6.8	G	2.87
CTR3137	10	I	3.36
CTR3138	15	J	3.76
CTR3139	22	L	5.40
CTR3140	33	M	8.66
CTR3141	47	N	11.82
CTR3142	68	P	22.39

Type	Value (μF)	Case Code	Price Each
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35 V TYPES

CTR3150	0.1	A	\$ 1.85
CTR3151	0.15	A	1.85
CTR3152	0.22	B	1.85
CTR3153	0.33	B	1.85
CTR3154	0.47	B	1.85
CTR3155	0.68	B	1.85
CTR3156	1	C	1.85
CTR3157	1.5	D	1.85
CTR3158	2.2	E	2.09
CTR3159	3.3	G	2.31
CTR3160	4.7	H	3.04
CTR3161	6.8	I	3.04
CTR3162	10	J	8.66
CTR3163	15	L	8.66
CTR3164	22	M	8.66
CTR3165	33	N	11.82
CTR3166	47	P	22.39

50 V TYPES

CTR3175	0.1	A	\$ 1.85
CTR3176	0.15	A	1.85
CTR3177	0.22	B	1.85
CTR3178	0.33	B	1.85
CTR3179	0.47	C	1.85
CTR3180	0.68	C	2.87
CTR3181	1	D	2.87
CTR3182	1.5	E	2.87
CTR3183	2.2	G	2.87
CTR3184	3.3	I	6.36
CTR3185	4.7	K	6.36

Rated Voltage	Working Voltage	Surge Voltage
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VOLTAGE RATINGS at T ≤ 85°C

6.3	6.3	8
10	10	13
16	16	20
25	25	32
35	35	44
50	50	63

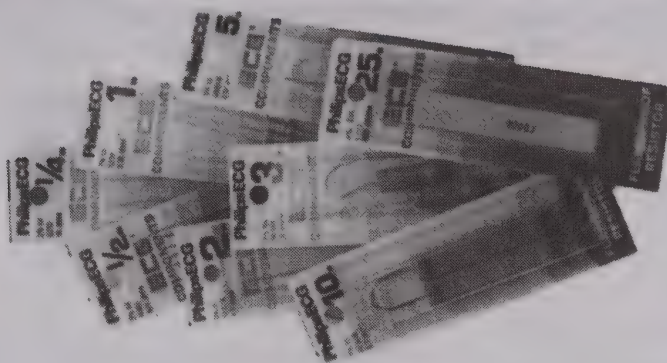
VOLTAGE RATINGS at 85°C TO 125°C

6.3	4	5
10	6.3	8
16	10	13
25	16	20
35	22	28
50	32	40

Case Code	Height (H) (in.)	Diameter (D) (in.)	Lead Spacing (L) (in.)
A	0.295	0.177	0.100
B	0.315	0.177	0.100
C	0.315	0.197	0.100
D	0.354	0.197	0.100
E	0.374	0.197	0.100
F	0.394	0.217	0.100
G	0.413	0.217	0.100
H	0.413	0.236	0.100
I	0.433	0.236	0.100
J	0.453	0.256	0.200
K	0.492	0.276	0.200
L	0.531	0.295	0.200
M	0.571	0.335	0.200
N	0.610	0.354	0.200
P	0.630	0.374	0.200

All dimensions ±20%.

WE CAN SUPPLY ALL YOUR REQUIREMENTS FOR INDUSTRIAL ELECTRONIC EQUIPMENT AND PARTS. WE OFFER A COMPLETE LINE WITH UP-TO-DATE STOCK, FAST DELIVERY AND PRODUCTION QUANTITY PRICING. CALL FOR INFORMATION ON NEW OR UNLISTED ITEMS.



INDIVIDUAL PACKAGES

ECG No.	Resistance Range	Watts	Tolerance	Package	Net Each
FILM-TYPE FLAMEPROOF					
QP10 to QP91	Under 10 ohms	1/4	5%	2	\$0.95
Q010 to Q430	10 ohms to 300K ohms	1/4	2%	4	.95
Q433C to Q510C	330K to 1 megohm	1/4	2%	2	.95
RM20C to RP91	Under 10 ohms	1/2	5%	2	.95
R010 to R510	10 ohms to 1 megohm	1/2	2%	6	.95
R511C to R622C	1.1 megohm to 22 megohms	1/2	2%	2	.95
SM10C to SP91C	Under 10 ohms	1	5%	2	.95
S010 to S510	10 ohms to 1 megohm	1	2%	4	.95
S511C to S622C	1.1 megohm to 22 megohms	1	2%	2	1.05
S624C to S710C	24 megohms to 100 megohms	1	5%	2	1.05
TM10C to TP91C	Under 10 ohms	2	5%	2	.95
T010 to T515	10 ohms to 1.5 megohms	2	2%	2	.95
T516C to T622C	1.6 megohms to 22 megohms	2	2%	2	.95
T624C to T710C	24 megohms to 100 megohms	2	5%	2	.95
N010 to N422	10 ohms to 220K ohms	3	5%	2	1.05
V022F to V422F	22 ohms to 220K ohms	5	5%	2	1.25
X022F to X422F	22 ohms to 220K ohms	10	5%	1	.95
WIRE WOUND FLAMEPROOF					
SM10W to S210W	0.10 ohms to 1K ohms	1	5%	2	\$1.05
TM10W to T210W	0.10 ohms to 1K ohms	2	5%	2	1.05
CERAMIC SQUARE CASE (WIRE-WOUND FLAMEPROOF)					
VM10W to V315	0.10 ohms to 1K ohms	5	5%	2	\$0.95
XM10W to X327	0.10 ohms to 27K ohms	10	5%	2	1.05
YP10W to Y315	1.00 ohms to 15K ohms	25	5%	1	1.05

ASSORTMENT OF PACKAGES

ECG No.	Resistance Range	Type	Watts	No. of Packages	Net Each
QR270	Fast mover assortments	Film	1/4, 1/2	270	\$235.15
QA54	10 ohms to 270K ohms	Film	1/4	54	51.05
QB54	11 ohms to 300K ohms	Film	1/4	54	51.05
QH13	330K to 1 megohm	Film	1/4	13	12.30
RA61	10 ohms to 1 megohm	Film	1/2	61	57.65
RB60	11 ohms to 910K ohms	Film	1/2	60	56.70
RH32	1.1 megohm to 22 megohm	Film	1/2	32	30.25
SA61	10 ohms to 1 megohm	Film	1	61	57.65
SB60	11 ohms to 910K ohms	Film	1	60	56.70
SH48	1.1 megohm to 100 megohm	Film	1	48	50.40
SW61	1.10 ohms to 1K ohm	WW	1	61	64.05
STN201	Fast mover assortments	Film	1, 2, 3	201	196.75
TA63	10 ohms to 1.5 megohms	Film	2	63	59.55
TB62	11 ohms to 1.3 megohms	Film	2	62	50.60
TH44	1.6 megohm to 100 megohm	Film	2	44	41.60
TW61	0.10 ohm to 1K ohm	WW	2	61	64.05
NF55	10 ohms to 220K ohms	Film	3	55	57.75
VF51	22 ohms to 220K ohms	Film	5	51	64.25
XF51	22 ohms to 220K ohms	Film	10	51	48.20
VA67*	0.10 ohms to 15K ohms	WW	5	67	63.30
XA70*	0.10 ohms to 27K ohms	WW	10	70	73.50
YA59*	1.0 ohm to 15K ohms	WW	25	59	61.95
VX60F	Fast mover assortments	Film	5, 10	60	66.15
VXY95*	Fast mover assortments	WW	5, 10, 25	95	95.55

*Ceramic Square Case

RESISTOR KITS IN PRE-LOADED CABINETS

BULK PACKED RESISTORS

ECG No.	Resistance Range	Type	No. of Resistors	Net Each
KA60A	10 ohms to 820 ohms	Film	240	\$ 81.15
KB60A	11 ohms to 910K ohms	Film	240	81.15
KF60	10 ohms to 220K ohms	Film	157	122.80
KHP60*	0.10 ohms to 4.7K ohms	WW	159	117.70
KHP45*	0.10 ohms to 470 ohms	WW	123	87.60

HEXFET SELECTION
**TO-247AC
TO-3P**

A
TO-220AB

B
TO220

E
ISO-TO220

F
ISO-TO3P

G
PLASTIC INSERTABLE PACKAGES
N-Channel

Part No.	Fig.	BV _{DSS} Drain Source Voltage (Volts)	R _{DS(on)} On-State Resistance (Ohms)	I _D Continuous Drain Current 25°C Case (Amps)	P _D Max. Power Dissipation (Watts)	Price Each
IRFP044	A	60	0.028	57	180	\$ 4.81
IRFP054	A	60	0.014	70	300	10.08
IRFP064	A	60	0.009	70	500	14.11
IRFP140	A	100	0.077	31	180	4.66
IRFP150	A	100	0.055	47	300	8.96
IRFP240	A	200	0.18	20	150	5.00
IRFP250	A	200	0.085	34	250	9.11
IRFP260	A	200	0.070	38	250	★
IRFP244	A	250	0.28	15	150	5.12
IRFP254	A	250	0.14	26	250	8.45
IRFP264	A	250	0.095	32	250	★
IRFP340	A	400	0.55	11	150	5.63
IRFP350	A	400	0.30	18	250	9.27
IRFP360	A	400	0.20	28	410	26.35
IRFP440	A	500	0.85	8.8	150	5.85
IRFP448	A	500	0.60	11	180	9.10
IRFP450	A	500	0.40	16	250	9.45
IRFP460	A	500	0.27	25	410	27.88
IRFPC30	A	600	2.2	4.3	100	6.80
IRFPC40	A	600	1.2	6.8	150	12.10
IRFPC50	A	600	0.60	13	250	17.00
IRFPE30	A	800	3.0	5.2	210	7.06
IRFPE40	A	800	2.0	6.9	250	12.26
IRFPE50	A	800	1.2	11	360	14.45
IRFPF30	A	900	3.7	4.7	210	7.67
IRFPF40	A	900	2.5	4.7	150	13.69
IRFPF50	A	900	1.6	9.1	360	15.30
IRFPG30	A	1000	5.0	4.0	210	8.52
IRFPG40	A	1000	3.5	4.3	150	14.28
IRFPG50	A	1000	2.0	8.2	360	17.00

★Pricing on request.

P-Channel

Part No.	Fig.	BV _{DSS} Drain Source Voltage (Volts)	R _{DS(on)} On-State Resistance (Ohms)	I _D Continuous Drain Current 25°C Case (Amps)	P _D Max. Power Dissipation (Watts)	Price Each
IRF9Z14	B	-60	0.50	-6.7	43	\$ 1.14
IRF9Z24	B	-60	0.28	-11	60	2.98
IRF9Z34	B	-60	0.14	-18	88	5.00
IRF9510	B	-100	1.21	-4.0	43	2.11
IRF9520	B	-100	0.60	-6.8	60	2.38
IRF9530	B	-100	0.30	-12	88	2.92
IRF9540	B	-100	0.20	-19	150	6.63
IRF9610	B	-200	3.0	-1.7	20	2.23
IRF9620	B	-200	1.51	-3.5	40	3.37
IRF9630	B	-200	0.80	-6.5	75	3.45
IRF9640	B	-200	0.50	-11	125	7.62
IRFP9140	A	-100	0.20	-21	180	10.49
IRFP9240	A	-200	0.50	-12	150	13.28

Part Number	Fig.	BV _{DSS} Drain Source Voltage (Volts)	R _{DS(on)} On-State Resistance (Ohms)	I _D Continuous Drain Current 25°C Case (Amps)	P _D Max. Power Dissipation (Watts)	Price Each
N-CHANNEL						
IRFZ14	E	60	0.20	10	43	\$ 0.70
IRFZ24	E	60	0.10	17	60	.90
IRFZ34	E	60	0.050	30	88	1.96
IRFZ44	E	60	0.028	50	250	3.23
IRFZ48	E	60	0.018	50	250	4.51
IRF510	E	100	0.54	5.6	43	1.02
IRF520	E	100	0.27	9.2	60	1.22
IRF530	E	100	0.16	14	88	1.50
IRF540	E	100	0.077	28	150	3.28
IRF610	E	200	1.5	3.3	36	1.02
IRF620	E	200	0.80	5.2	50	1.29
IRF630	E	200	0.40	9.0	74	1.84
IRF640	E	200	0.18	18	125	3.35
IRF614	E	250	2.0	2.7	36	1.12
IRF624	E	250	1.1	4.4	50	1.29
IRF634	E	250	0.45	8.1	74	1.70
IRF644	E	250	0.28	14	125	3.86
IRF710	E	400	3.6	2.0	36	1.19
IRF720	E	400	1.8	3.3	50	1.33
IRF730	E	400	1.0	5.5	74	1.87
IRF740	E	400	0.55	10	125	3.67
IRF820	E	500	3.0	2.5	50	1.51
IRF830	E	500	1.5	4.5	74	1.73
IRF840	E	500	0.85	8.0	125	4.45
IRFBC20	E	600	4.4	2.2	50	2.62
IRFBC30	E	600	2.2	3.6	74	5.10
IRFBC40	E	600	1.2	6.2	125	8.33
IRFBE20	E	800	6.5	2.0	63	3.74
IRFBE30	E	800	3.0	5.2	210	6.29
IRFBF20	E	900	8.0	1.8	63	4.34
IRFBF30	E	900	3.7	4.7	210	6.83
IRFBG20	E	1000	11.5	1.3	50	4.59
IRFBG30	E	1000	5.0	4.0	210	7.57
IRFIZ24	F	60	0.10	14	37	1.11
IRFIZ34	F	60	0.050	20	38	2.16
IRFIZ44	F	60	0.028	30	48	3.67
IRFI530	F	100	0.16	9.7	39	1.70
IRFI540	F	100	0.077	17	48	3.84
IRFI630	F	200	0.40	5.9	32	2.04
IRFI640	F	200	0.18	9.8	40	3.88
IRFI634	F	250	0.45	5.6	32	1.90
IRFI644	F	250	0.28	7.9	40	4.06
IRFI730	F	400	1.0	3.5	32	2.07
IRFI740	F	400	0.55	5.4	40	4.28
IRFI820	F	500	3.0	2.1	30	1.72
IRFI830	F	500	1.5	3.1	32	2.21
IRFI840	F	500	0.85	4.6	40	5.29
IRFIP044	G	60	0.028	43	100	5.07
IRFIP054	G	60	0.014	64	120	10.34
IRFIP140	G	100	0.077	23	100	4.91
IRFIP150	G	100	0.055	31	120	9.79
IRFIP240	G	200	0.18	14	83	5.25
IRFIP250	G	200	0.085	22	96	9.86
IRFIP244	G	250	0.28	11	83	5.37
IRFIP254	G	250	0.14	17	96	8.70
IRFIP340	G	400	0.55	8	83	5.78
IRFIP350	G	400	0.30	11	96	10.00
IRFIP440	G	500	0.85	6.4	83	6.10
IRFIP448	G	500	0.60	7.4	89	9.75
IRFIP450	G	500	0.40	10	96	11.41

★Pricing on request.

DO4

DO5



A



B

6 TO 40 AMPS

Part Number	Fig.	V _{RRM} (V)	I _{F(AV)} @ T _C		Price Each
			(A)	(°C)	
6F10	A	100	6	158	\$1.77
6F20	A	200	6	158	1.88
6F40	A	400	6	158	2.36
6F60	A	600	6	158	2.66
6F80	A	800	6	158	2.95
6F100	A	1000	6	158	4.07
6F120	A	1200	6	158	4.75
12F10	A	100	12	144	1.93
12F20	A	200	12	144	2.00
12F40	A	400	12	144	2.50
12F60	A	600	12	144	2.95
12F80	A	800	12	144	3.25
12F100	A	1000	12	144	4.43
12F120	A	1200	12	144	5.09
1N1199A	A	50	12	150	1.38
1N1200A	A	100	12	150	1.43
1N1201A	A	150	12	150	1.49
1N1202A	A	200	12	150	1.54
1N1203A	A	300	12	150	1.77
1N1204A	A	400	12	150	1.85
1N1205A	A	500	12	150	2.15
1N1206A	A	600	12	150	2.38
1N3670A	A	700	12	150	3.09
1N3671A	A	800	12	150	3.25
1N3672A	A	900	12	150	3.54
1N3673A	A	1000	12	150	4.43
12F10B	A	100	12	146	2.04
12F20B	A	200	12	146	2.21
12F40B	A	400	12	146	2.77
12F60B	A	600	12	146	3.25
12F80B	A	800	12	146	3.57
12F100B	A	1000	12	146	4.86
12F120B	A	1200	12	146	5.61
1N3208	B	50	15	150	2.13
1N3209	B	100	15	150	2.22
1N3210	B	200	15	150	2.31
1N3211	B	300	15	150	2.50
1N3212	B	400	15	150	2.87
1N3213	B	500	15	150	3.61
1N3214	B	600	15	150	4.17
16F10	A	100	16	140	2.12
16F20	A	200	16	140	2.27
16F40	A	400	16	140	2.80
16F60	A	600	16	140	3.25
16F80	A	800	16	140	3.54
16F100	A	1000	16	140	4.75
16F120	A	1200	16	140	5.43
25F10	A	100	25	120	2.90
25F20	A	200	25	120	3.03
25F40	A	400	25	120	3.12
25F60	A	600	25	120	3.29
25F80	A	800	25	120	3.54
25F100	A	1000	25	120	4.81
25F120	A	1200	25	120	5.70
1N1183	B	50	35	140	1.69
1N1184	B	100	35	140	1.92
1N1185	B	150	35	140	2.23
1N1186	B	200	35	140	2.38
1N1187	B	300	35	140	3.24
1N1188	B	400	35	140	3.61
1N1189	B	500	35	140	3.98
1N1190	B	600	35	140	4.72
1N3765	B	700	35	140	6.48
1N3766	B	800	35	140	7.07
1N3767	B	900	35	140	7.66
1N3768	B	1000	35	140	9.48
40HF10	B	100	40	140	2.80
40HF20	B	200	40	140	3.19
40HF40	B	400	40	140	4.13
40HF60	B	600	40	140	4.72
40HF80	B	800	40	140	5.31
40HF100	B	1000	40	140	5.87
40HF120	B	1200	40	140	6.41
40HF140	B	1400	40	140	7.12
40HF160	B	1600	40	140	7.65

PHASE CONTROL THYRISTORS

TO48

TO65



C



D

25 TO 110 AMPS RMS

Part Number	Fig.	V _{RRM} V _{RDM} (V)	I _{T(RMS)} (A)	I _{F(AV)} @ T _C		Price Each
				(A)	(°C)	
10RIA10	C	100	25	10	85	\$ 7.02
10RIA20	C	200	25	10	85	7.43
10RIA40	C	400	25	10	85	8.84
10RIA60	C	600	25	10	85	9.57
10RIA80	C	800	25	10	85	10.46
10RIA100	C	1000	25	10	85	13.20
10RIA120	C	1200	25	10	85	15.27
2N681	C	25	25	16	65	7.50
2N682	C	50	25	16	65	7.62
2N683	C	100	25	16	65	7.74
2N684	C	150	25	16	65	7.86
2N685	C	200	25	16	65	8.10
2N686	C	250	25	16	65	8.26
2N687	C	300	25	16	65	8.26
2N688	C	400	25	16	65	8.85
2N689	C	500	25	16	65	9.44
2N690	C	600	25	16	65	9.44
2N691	C	700	25	16	65	10.33
2N692	C	800	25	16	65	10.33
16RIA10	C	100	35	16	85	7.43
16RIA20	C	200	35	16	85	7.96
16RIA40	C	400	35	16	85	9.43
16RIA60	C	600	35	16	85	10.32
16RIA80	C	800	35	16	85	11.34
16RIA100	C	1000	35	16	85	14.55
16RIA120	C	1200	35	16	85	14.92
16RIA140	C	1400	35	16	80	15.37
16RIA160	C	1600	35	16	80	15.73
2N5204	C	600	35	22	40	9.88
2N5205	C	800	35	22	40	10.62
2N5206	C	1000	35	22	40	13.57
2N5207	C	1200	35	22	40	15.28
22RIA10	C	100	35	22	85	7.97
22RIA20	C	200	35	22	85	8.50
22RIA40	C	400	35	22	85	10.03
22RIA60	C	600	35	22	85	10.92
22RIA80	C	800	35	22	85	12.10
22RIA100	C	1000	35	22	85	15.28
22RIA120	C	1200	35	22	85	15.55
22RIA140	C	1400	35	22	80	15.81
22RIA160	C	1600	35	22	80	15.99
25RIA10	C	100	40	25	85	8.98
25RIA20	C	200	40	25	85	9.78
25RIA40	C	400	40	25	85	11.37
25RIA60	C	600	40	25	85	12.55
25RIA80	C	800	40	25	85	13.73
25RIA100	C	1000	40	25	85	17.39
25RIA120	C	1200	40	25	85	18.14
25RIA140	C	1400	40	25	80	18.41
25RIA160	C	1600	40	25	80	18.76
50RIA10	D	100	80	50	94	13.28
50RIA20	D	200	80	50	94	13.95
50RIA40	D	400	80	50	94	16.52
50RIA60	D	600	80	50	94	17.70
50RIA80	D	800	80	50	94	19.18
50RIA100	D	1000	80	50	94	19.42
50RIA120	D	1200	80	50	94	20.01
50RIA140	D	1400	80	50	94	20.37
50RIA160	D	1600	80	50	94	20.82

BE SURE TO WATCH FOR OUR
"POWER SOURCE" BROCHURES.

FAST RECOVERY RECTIFIERS



Case Style
DO-203AA
DO-4



Case Style
DO-5

6 TO 16 AMP OUTPUT (DO-4)

Part Number	V _{RRM} (V)	I _{F(AV)} @ T _C		V _{FM} @ $\pi \times I_{F(AV)}$ (@ 25°C) (V)	Price Each
		(A)	(°C)		
6FL10S02	100	6	100	1.50	\$3.04
6FL20S02	200	6	100	1.50	3.45
6FL40S02	400	6	100	1.50	4.27
6FL60S02	600	6	100	1.50	4.71
6FL10S05	100	6	100	1.50	2.80
6FL20S05	200	6	100	1.50	3.04
6FL40S05	400	6	100	1.50	3.68
6FL60S05	600	6	100	1.50	3.98
6FL80S05	800	6	100	1.50	4.43
6FL100S05	1000	6	100	1.50	5.00
6FL10S10	100	6	100	1.50	2.54
6FL20S10	200	6	100	1.50	2.66
6FL40S10	400	6	100	1.50	3.25
6FL60S10	600	6	100	1.50	3.54
6FL80S10	800	6	100	1.50	3.98
6FL100S10	1000	6	100	1.50	4.46
1N3879	50	6	100	1.40	1.76
1N3880	100	6	100	1.40	2.04
1N3881	200	6	100	1.40	2.41
1N3882	300	6	100	1.40	2.87
1N3883	400	6	100	1.40	3.15
1N3889	50	12	100	1.40	2.13
1N3890	100	12	100	1.40	2.50
1N3891	200	12	100	1.40	2.87
1N3892	300	12	100	1.40	3.24
1N3893	400	12	100	1.40	3.89
12FL10S02	100	12	100	1.50	3.21
12FL20S02	200	12	100	1.50	3.62
12FL40S02	400	12	100	1.50	4.48
12FL60S02	600	12	100	1.50	4.95
12FL10S05	100	12	100	1.50	2.91
12FL20S05	200	12	100	1.50	3.21
12FL40S05	400	12	100	1.50	3.86
12FL60S05	600	12	100	1.50	4.18
12FL80S05	800	12	100	1.50	4.66
12FL100S05	1000	12	100	1.50	6.25
12FL10S10	100	12	100	1.50	2.66
12FL20S10	200	12	100	1.50	2.80
12FL40S10	400	12	100	1.50	3.41
12FL60S10	600	12	100	1.50	3.71
12FL80S10	800	12	100	1.50	4.18
12FL100S10	1000	12	100	1.50	5.36
16FL10S02	100	16	100	1.60	3.32
16FL20S02	200	16	100	1.60	3.80
16FL40S02	400	16	100	1.60	4.71
16FL60S02	600	16	100	1.60	5.18
16FL10S05	100	16	100	1.60	3.07
16FL20S05	200	16	100	1.60	3.32
16FL40S05	400	16	100	1.60	4.07
16FL60S05	600	16	100	1.60	4.39
16FL80S05	800	16	100	1.60	4.86
16FL100S05	1000	16	100	1.60	6.54
16FL10S10	100	16	100	1.60	2.80
16FL20S10	200	16	100	1.60	2.91
16FL40S10	400	16	100	1.60	3.57
16FL60S10	600	16	100	1.60	3.89
16FL80S10	800	16	100	1.60	4.39
16FL100S10	1000	16	100	1.60	5.61

20 TO 85 AMP OUTPUT (DO-5)

Part Number	V _{RRM} (V)	I _{F(AV)} @ T _C		V _{FM} @ $\pi \times I_{F(AV)}$ (@ 25°C) (V)	Price Each
		(A)	(°C)		
IRD3899	50	20	100	1.65	\$ 4.50
IRD3900	100	20	100	1.65	4.75
IRD3901	200	20	100	1.65	5.13
IRD3902	300	20	100	1.65	5.63
IRD3903	400	20	100	1.65	6.13
IRD3909	50	30	100	1.80	4.88
IRD3910	100	30	100	1.80	5.31
IRD3911	200	30	100	1.80	5.50
IRD3912	300	30	100	1.80	6.00
IRD3913	400	30	100	1.80	6.50
40HFL10S02	100	40	75	1.95	6.63
40HFL20S02	200	40	75	1.95	6.89
40HFL40S02	400	40	75	1.95	8.11
40HFL60S02	600	40	75	1.95	8.84
40HFL10S05	100	40	75	1.95	5.84
40HFL20S05	200	40	75	1.95	6.11
40HFL40S05	400	40	75	1.95	7.38
40HFL60S05	600	40	75	1.95	8.25
40HFL80S05	800	40	75	1.95	9.14
40HFL100S05	1000	40	75	1.95	10.50
40HFL10S10	100	40	75	1.95	5.30
40HFL20S10	200	40	75	1.95	5.57
40HFL40S10	400	40	75	1.95	6.63
40HFL60S10	600	40	75	1.95	7.38
40HFL80S10	800	40	75	1.95	8.11
40HFL100S10	1000	40	75	1.95	10.16
70HFL10S02	100	70	75	1.85	8.96
70HFL20S02	200	70	75	1.85	9.30
70HFL40S02	400	70	75	1.85	9.79
70HFL60S02	600	70	75	1.85	10.32
70HFL10S05	100	70	75	1.85	7.88
70HFL20S05	200	70	75	1.85	8.21
70HFL40S05	400	70	75	1.85	8.90
70HFL60S05	600	70	75	1.85	9.79
70HFL80S05	800	70	75	1.85	10.50
70HFL100S05	1000	70	75	1.85	11.21
70HFL10S10	100	70	75	1.85	7.16
70HFL20S10	200	70	75	1.85	7.52
70HFL40S10	400	70	75	1.85	8.37
70HFL60S10	600	70	75	1.85	9.08
70HFL80S10	800	70	75	1.85	9.79
70HFL100S10	1000	70	75	1.85	10.50
85HFL10S02	100	85	75	1.75	9.29
85HFL20S02	200	85	75	1.75	9.70
85HFL40S02	400	85	75	1.75	11.20
85HFL60S02	600	85	75	1.75	13.11
85HFL10S05	100	85	75	1.75	8.63
85HFL20S05	200	85	75	1.75	9.02
85HFL40S05	400	85	75	1.75	10.46
85HFL60S05	600	85	75	1.85	12.38
85HFL80S05	800	85	75	1.75	12.82
85HFL100S05	1000	85	75	1.75	14.59
85HFL10S10	100	85	75	1.75	8.21
85HFL20S10	200	85	75	1.75	8.38
85HFL40S10	400	85	75	1.75	9.57
85HFL60S10	600	85	75	1.75	10.16
85HFL80S10	800	85	75	1.75	11.34
85HFL100S10	1000	85	75	1.75	13.27

SCHOTTKY RECTIFIERS

D-64

DO204

C16

TO252AA

TO220AB

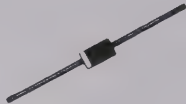
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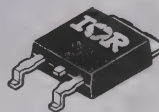
A



B



C



D



E



F

0.77 TO 6 AMPS

Part Number	Fig.	V _{RWM} (V)	I _{F(AV)} @ T _C		V _{FM} @ I _{FM} (A)	Price Each
			(A)	(°C)		
10MQ040	A	40	1.1	92	0.51	\$0.97
10MQ060	A	60	0.77	110	0.57	1.00
10MQ090	A	90	0.77	110	0.65	1.03
11DQ03	B	30	1.1	58	0.50	.87
11DQ04	B	40	1.1	58	0.50	.90
11DQ05	B	50	1.1	40	0.53	.93
11DQ06	B	60	1.1	40	0.53	.97
11DQ09	B	90	1.1	48	0.68	1.13
11DQ10	B	100	1.1	48	0.68	1.19
15MQ040	A	40	1.7	.....	0.55	1.02
31DQ03	C	30	3.3	35	0.51	1.42
31DQ04	C	40	3.3	35	0.51	1.44
31DQ05	C	50	3.3	19	0.53	1.55
31DQ06	C	60	3.3	19	0.53	1.64
31DQ09	C	90	3.3	25	0.69	1.80
31DQ10	C	100	3.3	25	0.69	1.90
30WQ03F	D	30	3.3	105	0.56	1.83
30WQ04F	D	40	3.3	105	0.56	1.89
30WQ05F	D	50	3.3	105	0.60	2.03
30WQ06F	D	60	3.3	105	0.60	2.18
30WQ09F	D	90	3.3	105	0.74	2.33
30WQ10F	D	100	3.3	105	0.74	2.47
50WQ03F	D	30	5.5	92	0.60	2.25
50WQ04F	D	40	5.5	92	0.60	2.33
50WQ05F	D	50	5.5	89	0.66	2.55
50WQ06F	D	60	5.5	89	0.66	2.62
50WQ09F	D	90	5.5	90	0.77	2.81
50WQ10F	D	100	5.5	90	0.77	3.20
50SQ060	C	60	5	92	0.52	1.86
50SQ080	C	80	5	119	0.52	1.93
50SQ100	C	100	5	119	0.52	2.22
50WQ03	D	30	5.5	97	0.62	2.25
50WQ04	D	40	5.5	97	0.62	2.33
50WQ05	D	50	5.5	97	0.68	2.55
50WQ06	D	60	5.5	97	0.68	2.62
50WQ09	D	90	5.5	97	0.68	2.81
50WQ10	D	100	5.5	97	0.68	3.20
6TQ035	F	35	6	163	0.51	2.02
6TQ040	F	40	6	163	0.51	2.09
6TQ045	F	45	6	163	0.51	2.16

6.6 TO 19 AMPS

Part Number	Fig.	V _{RWM} (V)	I _{F(AV)} @ T _C		V _{FM} @ I _{FM} (A)	Price Each
			(A)	(°C)		
6CWQ03F	D	30	6.6	97	0.63	\$2.32
6CWQ04F	D	40	6.6	97	0.63	2.41
6CWQ05F	D	50	6.6	92	0.67	2.57
6CWQ06F	D	60	6.6	92	0.67	2.70
6CWQ09F	D	90	6.6	94	0.79	2.81
6CWQ10F	D	100	6.6	94	0.79	3.20
MBR735	F	35	7.5	120	0.57	★
MBR745	F	45	7.5	120	0.57	2.16
80SQ035	B	35	8	119	0.44	1.46
80SQ040	B	40	8	119	0.44	1.58
80SQ045	B	45	8	119	0.44	1.71
8TQ080	F	80	8	157	0.58	2.51
8TQ100	F	100	8	157	0.58	2.65
10CTQ150	E	150	10	145	0.86	2.91
MBR1035	F	35	10	120	0.57	1.71
MBR1045	F	45	10	120	0.57	1.89
MBR2080CT	E	80	10	133	0.70	3.92
MBR2090CT	E	90	10	133	0.70	★
MBR20100CT	E	100	10	133	0.70	4.28
10TQ035	F	35	10	151	0.49	1.71
10TQ040	F	40	10	151	0.49	1.80
10TQ045	F	45	10	151	0.49	1.89
12CTQ035	E	35	12	157	0.63	1.71
12CTQ040	E	40	12	157	0.63	1.80
12CTQ045	E	45	12	157	0.63	1.89
15CTQ035	E	35	15	123	0.65	1.71
15CTQ040	E	40	15	123	0.65	1.80
15CTQ045	E	45	15	123	0.65	1.89
12TQ035	F	35	15	120	0.50	★
12TQ040	F	40	15	120	0.50	★
12TQ045	F	45	15	120	0.50	★
MBR1535CT	E	35	15	105	0.72	★
MBR1545CT	E	45	15	105	0.72	1.89
16CTQ080	E	80	16	145	0.69	3.92
16CTQ100	E	100	16	145	0.69	4.21
MBR1635	F	35	16	125	0.57	★
MBR1645	F	45	16	125	0.57	2.61
18TQ035	F	35	18	149	0.53	1.89
18TQ040	F	40	18	149	0.53	2.65
18TQ045	F	45	18	149	0.53	2.84
19TQ015	F	15	19	80	0.32	2.78

★PRICING ON REQUEST.

CALL US FOR INFORMATION
ON ANY UNLISTED PARTS OR EQUIPMENT.

SCHOTTKY RECTIFIERS

DO4

TO220

TO3

DO5

TO3P



A



B



C



D



E

20 TO 30 AMPS

Part No.	Fig.	V _{RWM} (V)	I _{F(AV)} (A) T _C		V _{FM} (A) I _{FM} (A)	Price Each
			(A)	(°C)		
20CTQ035	B	35	20	145	0.68	\$2.87
20CTQ040	B	40	20	145	0.68	3.07
20CTQ045	B	45	20	145	0.68	3.07
MBR2035CT	B	35	20	135	0.72	★
MBR2045CT	B	45	20	135	0.72	3.07
20TQ035	E	35	20	116	0.51	1.93
20TQ040	E	40	20	116	0.51	2.71
20TQ045	E	45	20	116	0.51	2.90
1N6391	A	45	25	115	0.78	7.79
1N6095	A	30	25	105	0.86	6.61
1N6096	A	40	25	105	0.86	7.25
MBR2535CT	B	35	30	130	0.73	3.81
MBR2545CT	B	45	30	130	0.73	4.18
25CTQ035	B	35	30	102	0.64	3.81
25CTQ040	B	40	30	102	0.64	4.00
25CTQ045	B	45	30	102	0.64	4.18
32CTQ030	B	30	30	109	0.53	2.64
30CTQ035	B	35	30	127	0.70	3.03
30CTQ040	B	40	30	127	0.70	3.25
30CTQ045	B	45	30	127	0.70	3.25
30CTQ050	B	50	30	97	0.71	3.51
30CTQ060	B	60	30	97	0.71	3.70
SD41	A	35	30	96	0.58	3.97
20FQ035	A	35	30	111	0.47	4.19
20FQ040	A	40	30	111	0.47	4.38
20FQ045	A	45	30	111	0.47	4.65
21FQ035	A	35	30	107	0.51	4.10
21FQ040	A	40	30	107	0.51	4.19
21FQ045	A	45	30	107	0.51	4.39
30FQ035	A	35	30	144	0.54	4.68
30FQ040	A	40	30	144	0.54	4.68
30FQ045	A	45	30	144	0.54	4.97
30CPQ035	E	35	30	124	0.64	4.38
30CPQ040	E	40	30	124	0.64	4.50
30CPQ045	E	45	30	124	0.64	4.61
30CPQ050	E	50	30	112	0.70	4.97
30CPQ060	E	60	30	112	0.70	5.60
30CPQ080	E	80	30	140	0.81	6.22

30 TO 60 AMPS

Part No.	Fig.	V _{RWM} (V)	I _{F(AV)} (A) T _C		V _{FM} (A) I _{FM} (A)	Price Each
			(A)	(°C)		
30CPQ100	E	100	30	140	0.81	\$ 6.64
30CPQ150	E	150	30	131	0.93	7.32
MBR3035PT	E	35	30	105	0.72	★
MBR3045PT	E	45	30	105	0.72	4.76
40CPQ035	E	35	40	120	0.56	8.19
40CPQ040	E	40	40	120	0.56	8.63
40CPQ045	E	45	40	120	0.56	8.99
40CPQ050	E	50	40	120	0.64	9.69
40CPQ060	E	60	40	120	0.64	10.01
40CPQ080	E	80	40	145	0.75	11.12
40CPQ100	E	100	40	145	0.75	11.88
MBR3035CT	C	35	30	105	0.72	★
MBR3045CT	C	45	30	105	0.72	7.60
40CDQ035	C	35	40	135	0.71	6.61
40CDQ040	C	40	40	135	0.71	6.97
40CDQ045	C	45	40	135	0.71	7.37
1N6097	D	30	50	70	0.86	8.53
1N6098	D	40	50	70	0.86	9.80
1N6392	D	45	60	115	0.68	10.31
SD51	D	35	60	90	0.66	5.00
50HQ035	D	35	60	101	0.53	6.68
50HQ040	D	40	60	101	0.53	7.18
50HQ045	D	45	60	101	0.53	7.82
51HQ035	D	35	60	96	0.58	6.34
51HQ040	D	40	60	96	0.58	6.82
51HQ045	D	45	60	96	0.58	7.28
55HQ030	D	30	60	110	0.41	7.44
SD241	C	35	60	120	0.89	5.51
60CDQ035	C	35	60	120	0.89	6.80
60CDQ040	C	40	60	120	0.89	7.18
60CDQ045	C	45	60	120	0.89	7.57
60HQ080	D	80	60	118	0.70	8.38
60HQ100	D	100	60	118	0.70	8.80
75HQ035	D	35	75	117	0.63	6.99
75HQ040	D	40	75	117	0.63	7.40
75HQ045	D	45	75	117	0.63	7.96
MBR7535	D	35	75	90	0.60	★
MBR7545	D	45	75	90	0.60	★
85HQ035	D	35	85	112	0.62	7.47
85HQ040	D	40	85	112	0.62	8.03
85HQ045	D	45	85	112	0.62	8.60

★Pricing on request.

RECTIFIERS, STANDARD RECOVERY

750 mA TO 50 AMPS

Part No.	Fig.	V _{RWM} (V)	I _{F(AV)} (A) T _C		V _{FM} (A) I _{FM} (A)	Price Each
			(A)	(°C)		
1N4001	A	50	1.0	75	1.10	\$0.075
1N4002	A	100	1.0	75	1.10	.081
1N4003	A	200	1.0	75	1.10	.085
1N4004	A	400	1.0	75	1.10	.09
1N4005	A	600	1.0	75	1.10	.105
1N4006	A	800	1.0	75	1.10	.115
1N4007	A	1000	1.0	75	1.10	.125
1N4816	A	50	1.5	40	1.30	.22
1N4817	A	100	1.5	40	1.30	.24
1N4818	A	200	1.5	40	1.30	.26
1N4819	A	300	1.5	40	1.30	.28
1N4820	A	400	1.5	40	1.30	.30
1N4821	A	500	1.5	40	1.30	.32
1N4822	A	600	1.5	40	1.30	.34
1N5052	A	700	1.5	40	1.30	.38
1N5053	A	800	1.5	40	1.30	.40
1N5054	A	1000	1.5	40	1.30	.42
1N5401	B	100	3	105	1.2	★
1N5402	B	200	3	105	1.2	★
1N5404	B	400	3	105	1.2	★
1N5406	B	600	3	105	1.2	★
1N5407	B	800	3	105	1.2	★
1N5408	B	1000	3	105	1.2	★

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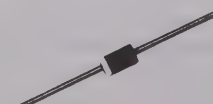
A



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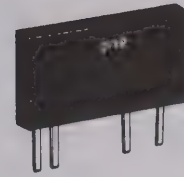
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C-16

CHIPSWITCH® SOLID STATE RELAY

Part No.	Fig.	Operating Voltage Range V(RMS)	Maximum Load Current (a 40°C A(RMS)	Trans. Overvolt V(pk)	Turn-On Signal (DC)	Dielectric Strength Input/Output V(RMS)	Minimum Off State dv/dt (a Rated V 25°C V/μs	Maximum Off State Leakage μA	Price Each
SP1110	A	20-140	1.0 Free Standing	300	5 mA	4000	600	10	\$7.30
SP1210	A	20-140	1.0 Free Standing	300	10 mA	4000	600	10	6.80
SP2110	A	20-280	1.0 Free Standing	450	5 mA	4000	600	10	7.70
SP2210	A	20-280	3.0 w/Heat Sink	450	10 mA	4000	600	10	7.30
SP6110	A	20-280	3.0 w/Heat Sink	600	5 mA	4000	600	10	8.70
SP6210	A	20-280	3.0 w/Heat Sink	600	10 mA	4000	600	10	8.30
DP1110	B	20-140	1.0	300	5 mA	4000	600	10	5.80
DP1210	B	20-140	1.0	300	10 mA	4000	600	10	5.60
DP1610	B	20-140	1.0	300	3.5 V	4000	600	10	6.40
DP2110	B	20-280	1.0	450	5 mA	4000	600	10	6.00
DP2210	B	20-280	1.0	450	10 mA	4000	600	10	5.80
DP2610	B	20-280	1.0	450	3.5 V	4000	600	10	6.60
DP6110	B	20-280	1.0	600	5 mA	4000	600	10	6.80
DP6210	B	20-280	1.0	600	10 mA	4000	600	10	6.60
DP6610	B	20-280	1.0	600	3.5 V	4000	600	10	7.40
CS5005	C	20-280	0.3	500	5 mA	4000	1200	10	4.70
CS5010	C	20-280	0.3	500	10 mA	4000	1200	10	4.10
CS6005	C	20-280	0.3	600	5 mA	4000	1200	10	5.00
CS6010	C	20-280	0.3	600	10 mA	4000	1200	10	4.40



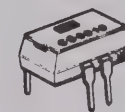
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B

PHOTOVOLTAIC RELAY

Part No.	Fig.	Operating Voltage Range V(pk)	Max. On-State Res. (a 25°C Ohms		Max. Load Current (a 40°C (DC) mA	Nom. Control Current (DC) mA	Min. Off-State Res. Ohms	Dielectric Strength Input/Output V(RMS)	Max. Response Time On/Off μsec	Max. Thermal Offset Voltage (a 5 mA Control μV	Price Each
			AC/DC	DC							
PVR1300	D	±100	5.0	1.5	700	10	10 ⁸	1500	300/50	0.2	\$10.50
PVR1301	D	±100	5.0	1.5	700	10	10 ¹⁰	1500	300/50	0.2	11.20
PVR2300	D	±200	24	6.0	260	10	10 ⁸	1500	100/50	0.2	9.50
PVR3300	D	±300	24	6.0	260	10	10 ⁸	1500	100/50	0.2	10.50
PVR3301	D	±300	24	6.0	260	10	10 ¹⁰	1500	100/50	0.2	11.20
PVA1052	C	±100	35	.....	70	5.0	10 ⁸	2500	25/15	0.2	4.80
PVA1054	C	±100	35	.....	70	5.0	10 ¹⁰	2500	25/15	0.2	5.20
PVA1352	C	±100	5.0	.....	315	5.0	10 ⁸	2500	300/50	0.2	4.80
PVA1354	C	±100	5.0	.....	315	5.0	10 ¹⁰	2500	300/50	0.2	5.20
PVA2352	C	±200	24	.....	130	5.0	10 ⁸	2500	100/50	0.2	4.30
PVA3054	C	±300	160	.....	40	5.0	10 ¹⁰	2500	25/15	0.2	5.20
PVA3055	C	±300	160	.....	40	5.0	10 ¹¹	2500	25/15	0.2	6.00
PVA3324	C	±300	24	.....	130	2.0	10 ¹⁰	2500	100/50	0.2	6.00
PVA3354	C	±300	24	.....	130	5.0	10 ⁸	2500	100/50	0.2	5.20
PVAZ172	C	±60	0.5	.....	1200	10	10 ⁸	1500	500/8000	0.2	8.00
PVD1052	C	±100	.....	8.0	160	5.0	10 ⁸	2500	25/15	0.2	5.10
PVD1054	C	±100	.....	8.0	160	5.0	10 ¹⁰	2500	25/15	0.2	5.50
PVD1352	C	±100	.....	1.5	500	5.0	10 ⁸	2500	300/50	0.2	5.10
PVD1354	C	±100	.....	1.5	500	5.0	10 ¹⁰	2500	300/50	0.2	5.50
PVD2352	C	±200	.....	6.0	220	5.0	10 ⁸	2500	100/50	0.2	4.60
PVD3354	C	±300	.....	6.0	220	5.0	10 ¹⁰	2500	100/50	0.2	5.50
PVDZ172	C	±60	.....	0.25	1400	10	10 ⁸	1500	500/8000	0.2	6.80



C



D

Part No.	Fig.	Number Outputs	Output Voltage V(DC)	Short Circuit Current μA	Nom. Control Current (DC) mA	Dielectric Strength Input/Output V(RMS)	Price Each
PV15100	C	1	5.0	10.0	10	2500	\$3.50
PV1050	C	2	5.0/10	10/5	10	2500	4.50

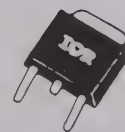
HEXFRED ULTRA-FAST SOFT RECOVERY SEMICONDUCTORS

Part Number	Fig.	V _{RWM} (V)	I _{F(AV)}		V _{FM/a} I _{F(AV)} (V)	Price Each
			(A)	(°C)		
HFA06SD60	C	600	6	100	.....	★
HFA08TB60	D	600	8	90	.....	★
HFA15TB60	D	600	15	100	1.7	★
HFA25TB60	D	600	25	100	.....	★
HFA20TB120	D	1200	20	100	.....	★
HFA16TA60C	D	600	16	100	.....	★
HFA30TA60C	D	600	30	100	1.7	★
HFA08PB60	E	600	8	100	.....	★
HFA15PB60	E	600	15	100	1.7	★
HFA25PB60	E	600	25	100	.....	★
HFA20PB120	E	1200	20	100	.....	★
HFA16PA60C	E	600	16	100		★
HFA16PA60C	E	600	30	100	1.7	★
HFA50PA60C	E	600	50	100		★

TO252 D-Pak

TO220

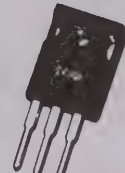
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C



D



E

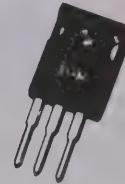
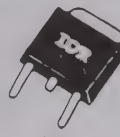
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D-64

TO252
D-Pak

TO220

TO247



A

B

C

D

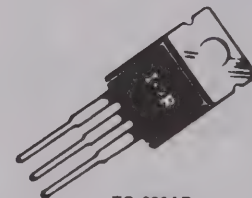
E

Part Number	Fig.	V _{RWM} (V)	I _F (AV)		V _{FM} /α I _F (AV) (V)	Price Each
			(A)	(°C)		
ULTRA FAST RECOVERY DIODES 1 TO 25 AMPS						
10DF1	A	100	1	25	1.05	\$0.44
10DF2	A	200	1	25	1.05	.52
10DF4	A	400	1	25	1.20	.64
10DF6	A	600	1	25	1.20	.68
10DF8	A	800	1	25	1.20	.72
11DF1	A	100	1	63	1.05	.70
11DF2	A	200	1	63	1.05	.76
11DF3	A	300	1	63	1.25	.88
11DF4	A	400	1	63	1.25	.94
10MF2	B	200	1	122	0.98	.72
30DF1	A	100	3	40	1.05	.82
30DF2	A	200	3	40	1.05	.86
30DF4	A	400	3	40	1.25	.90
30DF6	A	600	3	40	1.25	.94
31DF1	A	100	3	57	0.98	.78
31DF2	A	200	3	57	0.98	.88
31DF3	A	300	3	57	1.25	.96
31DF4	A	400	3	57	1.25	1.04
30WF10F	C	100	3.3	104	1.35	1.00
30WF20F	C	200	3.3	104	1.35	1.40
30WF30F	C	300	3.3	104	1.35	1.80
30WF40F	C	400	3.3	104	1.35	2.20
50WF10F	C	100	5.5	104	1.01	1.66
50WF20F	C	200	5.5	104	1.01	1.76
50WF30F	C	300	5.5	104	1.01	1.84
50WF40F	C	400	5.5	104	1.01	1.96

Part Number	Fig.	V_{RWM} (V)	$I_F(AV)$		$V_{FM}/I_F(AV)$ (V)	Price Each
			(A)	(°C)		
6CWF10F	C	100	6.6	117	0.98	1.32
6CWF20F	C	200	6.6	117	0.98	1.86
10CTF10	D	100	10	117	0.98	3.12
10CTF20	D	200	10	117	0.98	3.24
10CTF30	D	300	10	112	1.25	3.80
10CTF40	D	400	10	112	1.25	4.00
10JTF10	D	100	10	117	0.98	3.12
10JTF20	D	200	10	117	0.98	3.24
10JTF30	D	300	10	112	1.25	3.80
10JTF40	D	400	10	112	1.25	4.00
16CPF10	E	100	16	113	0.98	3.68
16CPF20	E	200	16	113	0.98	3.80
16CPF30	E	300	16	109	1.25	4.46
16CPF40	E	400	16	109	1.25	4.68
16JPF10	E	100	16	113	0.98	3.68
16JPF20	E	200	16	113	0.98	3.80
16JPF30	E	300	16	109	1.25	4.46
16JPF40	E	400	16	109	1.25	4.68
25CPF10	E	100	25	93	0.98	4.50
25CPF20	E	200	25	93	0.98	5.30
25CPF30	E	300	25	85	1.25	5.70
25CPF40	E	400	25	85	1.25	6.20
25JPF10	E	100	25	93	0.98	4.50
25JPF20	E	200	25	93	0.98	5.30
25JPF30	E	300	25	85	1.25	5.70
25JPF40	E	400	25	85	1.25	6.20

STANDARD-SPEED IGBTs APPLICATIONS: HIGH VOLTAGE MOTOR CONTROLS, UPS

Part No.	Fig.	BV_{CES} Collector to Emitter Breakdown Voltage (V)	$V_{GE(th)}$ Gate to Emitter Threshold Voltage Min./Max. (V)	$V_{CE(on)}$ Collector to Emitter Saturation Voltage Max. (V)	I_C Continuous Collector Current		E_{ts} typ Total Switching Loss @ $T_J = 150^\circ C$ $V_{CE} = 480V$ (mJ) @ (A)	P_D Max. Power Dissip. (W)	Price Each
					@ $T_C = 25^\circ C$ (A)	@ $T_C = 100^\circ C$ (A)			
IRGBC20S	A	600	3.0/5.5	2.0	19	10	4.1 @ 10	60	\$ 2.67
IRGBC30S	A	600	3.0/5.5	1.9	34	18	7.1 @ 18	100	3.89
IRGBC40S	A	600	3.0/5.5	1.8	50	31	13 @ 31	160	6.97
IRGPC40S	B	600	3.0/5.5	1.8	60	31	13 @ 31	160	7.82
IRGPC50S	B	600	3.0/5.5	1.6	70	41	16 @ 41	200	15.30



TO-220AB

A

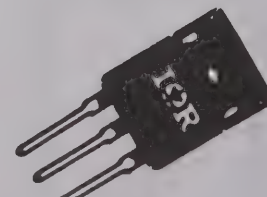
FAST-SPEED IGBTs APPLICATIONS: HIGH VOLTAGE UPS'S, MOTOR CONTROL, INDUSTRIAL

IRGBC20F	A	600	3.0/5.5	2.8	16	9	1.8 @ 9	60	\$ 2.94
IRGBC30F	A	600	3.0/5.5	2.1	31	17	2.5 @ 17	100	4.61
IRGBC40F	A	600	3.0/5.5	2.0	49	27	4.4 @ 27	160	7.74
IRGBF20F	A	900	3.5/5.5	2.5	12	7	1.5 @ 6	...	3.82
IRGPC40F	B	600	3.0/5.5	2.0	49	47	4.4 @ 27	160	8.74
IRGPC50F	B	600	3.0/5.5	1.7	70	39	6.0 @ 39	200	17.00
IRGPF30F	B	900	3.5/5.5	2.5	24	13	3 @ 12	...	★
IRGPF40F	B	900	3.5/5.5	2.5	42	23	5 @ 20	...	11.36
IRGPF50F	B	900	3.5/5.5	2.5	56	31	10 @ 40	...	22.10
IRGPH40F	B	1200	3.5/5.5	2.2	40	22	5 @ 10	...	12.23
IRGPH50F	B	1200	3.5/5.5	2.2	50	27	10 @ 20	...	26.66

ULTRAFAST™ IGBTs APPLICATIONS: HIGH VOLTAGE SMPS'S, MOTOR CONTROLS, ROBOTICS

IRGBC20U	A	600	3.0/5.5	3.0	13	6.5	0.35 @ 6.5	60	\$ 3.32
IRGBC30U	A	600	3.0/5.5	3.0	23	12	0.59 @ 12	100	5.75
IRGBC40U	A	600	3.0/5.5	3.0	40	20	1.5 @ 20	160	8.84
IRGPC40U	B	600	3.0/5.5	3.0	40	20	1.5 @ 20	160	9.95
IRGPC50U	B	600	3.0/5.5	3.0	55	27	1.7 @ 27	200	19.04

* Pricing on request.



TO-247AC (TO-3P)

B

Zener Diodes

Note: 10 watt and 50 watt Zeners listed have anode connected to stud. Add suffix letter "K" to the ECG number for cathode connected to stud. The ECG type numbers shown have a standard tolerance for the Zener voltage of +5%.



Voltage (See Note for Tolerance)	Axial Lead			Stud Mount	
	Fig. No. Z3A	Z18	Z19	Z20	
	1/2 Watt†	1 Watt†	5 Watt	10 Watt	50 Watt
2.4	ECG5000A	---	---	---	---
2.5	ECG5001A	---	---	---	---
2.7	ECG5002A	ECG5063A	---	---	---
2.8	ECG5003A	---	---	---	---
3.0	ECG5004A	ECG5065A	---	---	---
3.3	ECG5005A	ECG5066A	ECG5111A	ECG5172A	---
3.6	ECG5006A	ECG134A	ECG5112A	ECG5173A	---
3.9	ECG5007A	ECG5067A	ECG5113A	ECG5174A	ECG5240A
4.3	ECG5008A	ECG5068A	ECG5114A	ECG5175A	ECG5241A
4.7	ECG5009A	ECG5069A	ECG5115A	ECG5176A	ECG5242A
5.1	ECG5010A	ECG135A	ECG5116A	ECG5177A	ECG5243A
5.6	ECG5011A	ECG136A	ECG5117A	ECG5178A	ECG5244A
6.0	ECG5012A	ECG5070A	ECG5118A	ECG5179A	ECG5245A
6.2	ECG5013A	ECG137A	ECG5119A	ECG5180A	ECG5246A
6.8	ECG5014A	ECG5071A	ECG5120A	ECG5181A	ECG5247A
7.5	ECG5015A	ECG138A	ECG5121A	ECG5182A	ECG5248A
8.2	ECG5016A	ECG5072A	ECG5122A	ECG5183A	ECG5249A
8.7	ECG5017A	ECG5073A	ECG5123A	ECG5184A	ECG5250A
9.1	ECG5018A	ECG139A	ECG5124A	ECG5185A	ECG5251A
10.0	ECG5019A	ECG140A	ECG5125A	ECG5186A	ECG5252A
11.0	ECG5020A	ECG5074A	ECG5126A	ECG5187A	ECG5253A
11.5	---	ECG141A	---	---	---
12.0	ECG5021A	ECG142A	ECG5127A	ECG5188A	ECG5254A
13.0	ECG5022A	ECG143A	ECG5128A	ECG5189A	ECG5255A
14.0	ECG5023A	ECG144A	ECG5129A	ECG5190A	ECG5256A
15.0	ECG5024A	ECG145A	ECG5130A	ECG5191A	ECG5257A
16.0	ECG5025A	ECG5075A	ECG5131A	ECG5192A	ECG5258A
17.0	ECG5026A	ECG5076A	ECG5132A	ECG5193A	ECG5259A
18.0	ECG5027A	ECG5077A	ECG5133A	ECG5194A	ECG5260A
19.0	ECG5028A	ECG5078A	ECG5134A	ECG5195A	ECG5261A
20.0	ECG5029A	ECG5079A	ECG5135A	ECG5196A	ECG5262A
22.0	ECG5030A	ECG5080A	ECG5136A	ECG5197A	ECG5263A
24.0	ECG5031A	ECG5081A	ECG5137A	ECG5198A	ECG5264A
25.0	ECG5032A	ECG5082A	ECG5138A	ECG5199A	ECG5265A
27.0	ECG5033A	ECG146A	ECG5139A	ECG5200A	ECG5266A
28.0	ECG5034A	ECG5083A	ECG5140A	ECG5201A	ECG5267A
30.0	ECG5035A	ECG5084A	ECG5141A	ECG5202A	ECG5268A
33.0	ECG5036A	ECG147A	ECG5142A	ECG5203A	ECG5269A
36.0	ECG5037A	ECG5085A	ECG5143A	ECG5204A	ECG5270A
39.0	ECG5038A	ECG5086A	ECG5144A	ECG5205A	ECG5271A
43.0	ECG5039A	ECG5087A	ECG5145A	ECG5206A	ECG5272A
45.0	---	---	---	ECG5207A	ECG5273A
47.0	ECG5040A	ECG5088A	ECG5146A	ECG5208A	ECG5274A
50.0	---	---	---	ECG5209A	ECG5275A
51.0	ECG5041A	ECG5089A	ECG5147A	ECG5210A	ECG5276A
52.0	---	---	---	ECG5211A	ECG5277A
55.0	---	ECG148A	---	---	---
56.0	ECG5042A	ECG5090A	ECG5148A	ECG5212A	ECG5278A
60.0	ECG5043A	ECG5091A	ECG5149A	ECG5213A	ECG5279A
62.0	ECG5044A	ECG149A	ECG5150A	ECG5214A	ECG5280A
68.0	ECG5045A	ECG5092A	ECG5151A	ECG5215A	ECG5281A
75.0	ECG5046A	ECG5093A	ECG5152A	ECG5216A	ECG5282A
82.0	ECG5047A	ECG150A	ECG5153A	ECG5217A	ECG5283A
87.0	ECG5048A	ECG5094A	ECG5154A	ECG5218A	---
91.0	ECG5049A	ECG5095A	ECG5155A	ECG5219A	ECG5284A
100.0	ECG5050A	ECG5096A	ECG5156A	ECG5220A	ECG5285A
105.0	---	---	---	ECG5221A	ECG5286A
110.0	ECG5051A	ECG151A	ECG5157A	ECG5222A	ECG5287A
120.0	ECG5052A	ECG5097A	ECG5158A	ECG5223A	ECG5288A
123.0*	ECG5107T2	---	---	---	---
130.0	ECG5053A	ECG5098A	ECG5159A	ECG5224A	ECG5289A
140.0	ECG5054A	ECG5099A	ECG5160A	ECG5225A	ECG5290A
150.0	ECG5055A	ECG5100A	ECG5161A	ECG5226A	ECG5291A
160.0	ECG5056A	ECG5101A	ECG5162A	ECG5227A	ECG5292A
170.0	ECG5057A	ECG5102A	ECG5163A	ECG5228A	---
175.0	---	---	---	ECG5229A	ECG5293A
180.0	ECG5058A	ECG5103A	ECG5164A	ECG5230A	ECG5294A
190.0	ECG5059A	ECG5104A	ECG5165A	ECG5231A	ECG5295A
200.0	ECG5060A	ECG5105A	ECG5166A	ECG5232A	ECG5296A

1% Tolerance - 1/2 Watt

ECG Type	Nominal Zener Voltage Voltage @ TA = 25°C VZ @ IZT = 20 mA*
ECG5010T1	5.1
ECG5011T1	5.6
ECG5013T1	6.2
ECG5019T1	10
ECG5021T1	12

Fig. Z4

* IZT = Test Current

Fig. Z3A COLOR BAND DENOTES CATHODE	Fig. Z18 COLOR BAND DENOTES CATHODE
Fig. Z19 DO-4-Torque To 15 in.-lbs. min; 20 in.-lbs. max.	Fig. Z20 DO-5-Torque To 25 in.-lbs. min; 30 in.-lbs. max.

* 2% Tolerance

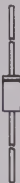
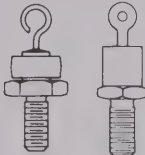
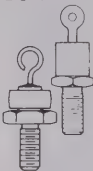
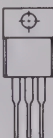
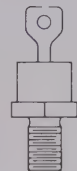
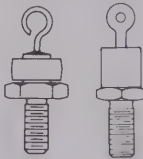
† 1/2 W and 1 W, 5% Tolerance Zeners are supplied 2 Per Pkg.

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Industrial Rectifiers

Note: Standard polarity is cathode to case.
* Indicates polarity is anode to case.



Peak Reverse Voltage (PRV Volts)	I _o , Average Rectified Forward Current (Amps)									
	3 A		6 A	6 A/22 A	12 A		15 A	16 A	20 A	25 A
50	ECG5800	ECG5830	ECG5850		ECG5870		ECG5940	ECG5892	ECG5912	
50		ECG5831*	ECG5851*		ECG5871*		ECG5941*	ECG5893*	ECG5913*	
100	ECG5801			ECG5812						
200	ECG5802	ECG5834	ECG5854		ECG5874		ECG5944	ECG5896	ECG5916	
200		ECG5835*	ECG5855*		ECG5875*		ECG5945*	ECG5897*	ECG5917*	
400	ECG5804	ECG5838	ECG5858	ECG5814	ECG5878		ECG5948	ECG5900	ECG5920	ECG5962
400		ECG5839*	ECG5859*		ECG5879*		ECG5949*	ECG5901*	ECG5921*	ECG5963*
600	ECG5806	ECG5842	ECG5862	ECG5815	ECG5882	ECG6013	ECG5952	ECG5904	ECG5924	
600		ECG5843*	ECG5863*		ECG5883*		ECG5953*	ECG5905*	ECG5925*	
800	ECG5808	ECG5846	ECG5866		ECG5886			ECG5908	ECG5928	ECG5966
800		ECG5847*	ECG5867*		ECG5887*			ECG5909*	ECG5929*	ECG5967*
1000	ECG5809	ECG5848	ECG5868	ECG5817	ECG5890			ECG5910	ECG5932	
1000		ECG5849*	ECG5869*		ECG5891*			ECG5911*	ECG5933*	
IFM Surge	150 A	40 A	150 A	400 A	250 A	300 A	250 A	300 A	400 A	300 A
T _c at Rated I _o (°C) Max	+ 105 (TL)	+ 150	+ 150	See # Note	+ 150	+ 80	+ 150	+ 150	+ 150	+ 100
V _F at Rated I _o	.9 V Typ 1.0 V Max	.9 V Typ 1.1 V Max	.9 V Typ 1.1 V Max	.8 V Typ .9 V Max	.9 V Typ 1.1 V Max	1.0 V Typ 1.6 V Max	.9 V Typ 1.1 V Max	.9 V Typ 1.1 V Max	.9 V Typ 1.1 V Max	.9 V Typ 1.1 V Max
Fig. No.	Z18A	Z19		Z26	Z19	Z41B	Z20	Z19		Z27
Package	Axial	DO-4		Axial	DO-4	TO-220	DO-5	DO-4		Press Fit
										

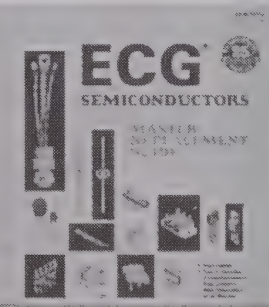
I_o = 6 A with PC Board Mtg., T_A = 60°C, I_o = 22 A, 1/8" Leads, T_L = 60°C

Fast Recovery

Reverse Recovery Time, T _{rr} = 200 ns Max		
Peak Reverse Voltage (PRV Volts)	I _o (Amps)	
	12 A	40 A
200	ECG5818	ECG6006
200	ECG5819*	ECG6007*
400	ECG5820	ECG6008
400	ECG5821*	ECG6009*
600	ECG5822	ECG6010
600	ECG5823*	ECG6011*
IFM Surge	200 A	350 A
T _c at Rated I _o (°C) Max	+100	+100
V _F at Rated I _o	.9 V Typ 1.1 V Max	1.0 V Typ 1.4 V Max
Fig. No.	Z19	Z20
Package	DO-4	DO-5

Ultra Fast Recovery

Peak Reverse Voltage (PRV Volts)	I _o , Average Rectified Forward Current (Amps)		
	8 A		15 A
200	ECG597		ECG599
400			
600		ECG598	
IFM Surge (Per Diode)	100 A	100 A	200 A
T _c @ Rated I _o Max (°C)	+125	+125	+150
Forward Voltage Drop @ Rated I _o , V _F (Volts) (Per Diode)	1.3	1.5	1.0
Reverse Recovery Time (ns)	35	60	35
Fig. No.		Z41A	
Package	TO-220 (2-Pin)		



ECG
SEMICONDUCTORS

MANUFACTURING
PLANT

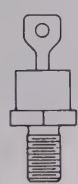
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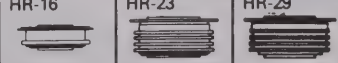
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Industrial Rectifiers (cont'd)

Note: Standard polarity is cathode to case.
* Indicates polarity is anode to case.

Peak Reverse Voltage (PRV Volts)	IO, Average Rectified Forward Current (Amps)								
	40 A	50 A	60 A	70 A	85 A	150 A	300 A	450 A	550 A
50	ECG5980		ECG6020	ECG6048					
50	ECG5981*		ECG6021*	ECG6049*					
100	ECG5982		ECG6022	ECG6050					
100	ECG5983*		ECG6023*	ECG6051*					
200	ECG5986		ECG6026	ECG6054	ECG6074				
200	ECG5987*		ECG6027*	ECG6055*	ECG6075*				
300	ECG5988								
300	ECG5989*								
400	ECG5990	ECG5826	ECG6034	ECG6060		ECG6154	ECG6354		
400	ECG5991*	ECG5827*	ECG6035*	ECG6061*		ECG6155*	ECG6355*		
500	ECG5992								
500	ECG5993*								
600	ECG5994		ECG6040	ECG6064	ECG6076	ECG6156	ECG6356		ECG6102
600	ECG5995*		ECG6041*	ECG6065*	ECG6077*	ECG6157*	ECG6357*		ECG6103*
800	ECG5998	ECG5828	ECG6042	ECG6068					
800	ECG5999*	ECG5829*	ECG6043*	ECG6069*					
1000	ECG6002		ECG6044	ECG6072		ECG6158	ECG6358		
1000	ECG6003*		ECG6045*	ECG6073*		ECG6159*	ECG6359*		
1200					ECG6078				ECG6104
1200					ECG6079*				ECG6105*
1400						ECG6162	ECG6362		
1400						ECG6163*	ECG6363*		
1600								ECG6106	
1600								ECG6107*	
IFM Surge	500 A	600 A	700 A	1200 A	1500 A	2100 A	5000 A	8500 A	10,000 A
T _C at Rated IO (°C) Max	+ 150	+ 150	+ 125	+ 125	+ 120	+ 130	+ 130	+ 120	+ 125
VF at Rated IO	1.0 V Typ 1.2 V Max	.9 V Typ 1.0 V Max	1.0 V Typ 1.2 V Max	1.0 V Typ 1.2 V Max	1.0 V Typ 1.1 V Max	1.0 V Typ 1.1 V Max	1.0 V Typ 1.2 V Max	1.1 V Typ 1.45 V Max	1.0 V Typ 1.1 V Max
Fig. No.	Z20	Z28	Z20			Z29	Z30	Z31	
Package	DO-5	Press Fit	DO-5			DO-8	DO-9	SR-75	
									

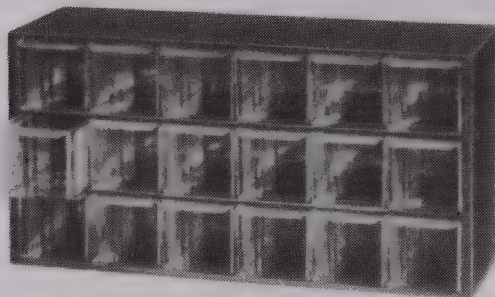
Peak Reverse Voltage (PRV Volts)	IO, Average Rectified Forward Current (Amps)		
	500 A	1200 A	2200 A
600	ECG6110	ECG6113	ECG6116
1200	ECG6112	ECG6115	ECG6118
IFM Surge	6500 A	12,500 A	30,000 A
T _C at Rated IO (°C) Max	+ 110	+ 105	+ 105
VF at Rated IO	1.4 V Typ 1.85 V Max	1.2 V Typ 1.6 V Max	1.1 V Typ 1.45 V Max
Fig. No.	Z32	Z33	Z34
Package	HR-16	HR-23	HR-29
			



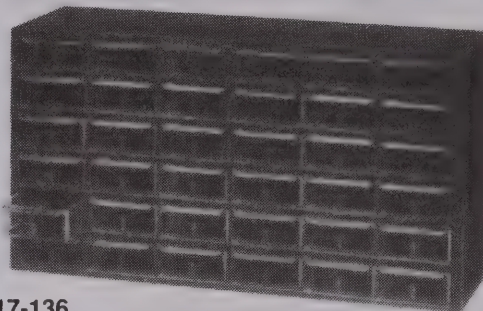
CALL US FOR INFORMATION ON THESE AND OTHER ECG PRODUCTS.

CALL US FOR DETAILS ON RECEIVING THE PHILIPS ECG SEMICONDUCTOR CROSS REFERENCE ON DISKETTE.

ECONOMY CABINETS



17-018



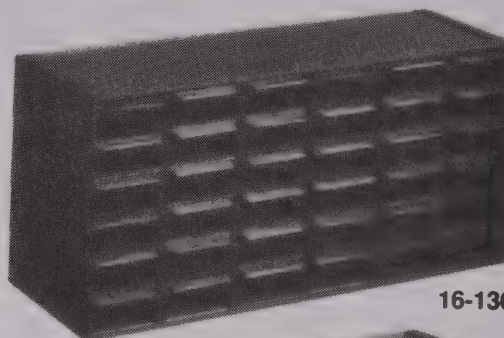
17-136

WELDED STEEL FRAME

An 18 drawer and 36 drawer model are available with frame finished in gray baked enamel. Drawers are molded of crystal styrene and fully transparent.

Stock No.	Description	Cabinet Size Inches			Drawers* Per Cabinet	Drawer* Stock No.
		W.	H.	D.		
17-018	Steel Frame	18	9 1/2	6	18	20-902
17-136	Steel Frame	18	9 1/2	6	36	20-502

*Cross dividers furnished one per drawer. Additional dividers available by the package.



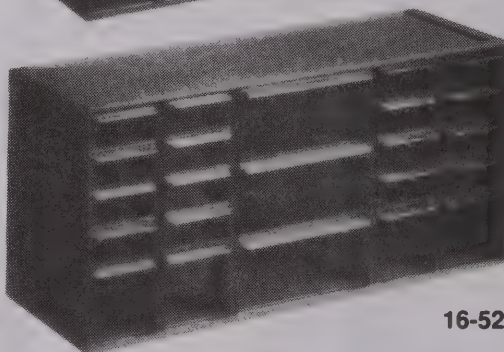
16-136

ABS COPOLYMER FRAME

One piece frame is virtually unbreakable. Pedestal bases fit securely into recessed tray tops allowing cabinets to be stacked together.

Stock No.	Description	Cabinet Size Inches			Drawers* Per Cabinet	Drawer* Stock No.
		W.	H.	D.		
16-136	ABS Frame	18 1/4	8 5/8	6 3/8	36	20-501
16-523	ABS Frame	18 1/4	8 5/8	6 3/8	23	(16) 20-501, (4) 20-901 (3) 20-611
16-718	ABS Frame	18 1/4	8 5/8	6 3/4	18	20-901

*Cross dividers furnished one per drawer. Additional dividers available by the package.

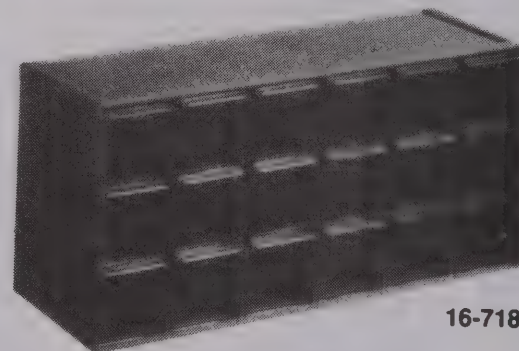


16-523

TRANSPARENT STYRENE DRAWERS

Window-clear styrene drawers allow you to see the contents inside.

Drawer Stock No.	Drawer Size Inches			Divider Stock No.
	W.	H.	D.	
20-501	2 3/4	1 1/4	5 3/4	40-501
20-502	2 3/4	1 1/4	5 3/4	40-501
20-611	3 5/8	2 1/2	5 3/4	NA
20-901	2 3/4	2 1/2	5 3/4	40-901
20-902	2 3/4	2 1/2	5 3/4	40-901



16-718

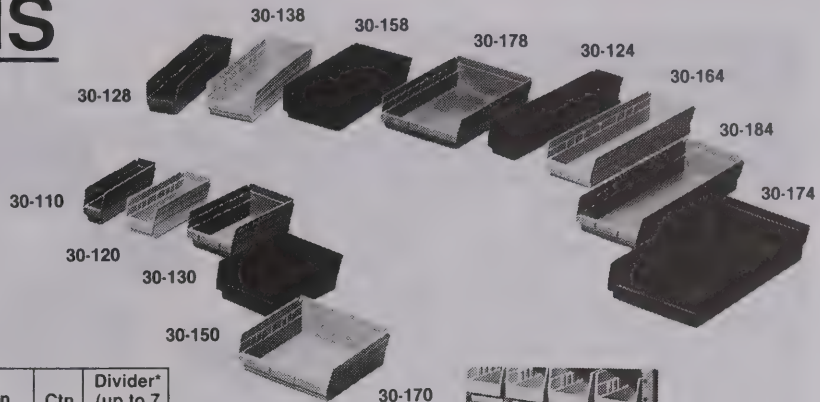
*All cabinets are individually boxed.



AKRO-MILS

SHELF BINS

Economy bins for 12", 18" and 24" deep shelving or automated storage and retrieval units.



Stock No.	Outside Dimen. In.			Inside Dimen. In.			Ctn. Qty.	Divider* (up to 7 per bin)
	W	H	L	W	H	L		
30-110	2-3/4	4	11-5/8	1-5/8	4	10-1/4	24	None
30-120	4-1/8	4	11-5/8	3	4	10-1/4	24	40-120
30-124	4-1/8	4	23-5/8	3	4	22-1/8	12	40-120
30-128	4-1/8	4	17-7/8	3	4	16-1/2	12	40-120
30-130	6-5/8	4	11-5/8	5-1/2	4	10-1/4	12	40-130
30-138	6-5/8	4	17-7/8	5-1/2	4	16-1/2	12	40-130
30-150	8-3/8	4	11-5/8	7-1/8	4	10-1/4	12	40-150
30-158	8-3/8	4	17-7/8	7-1/8	4	16-1/2	12	40-150
30-164	6-5/8	4	23-5/8	5-1/2	4	22-1/8	6	40-130
30-170	11-1/8	4	11-5/8	10	4	10-1/4	12	40-170
30-174	11-1/8	4	23-5/8	10	4	22-1/8	6	40-170
30-178	11-1/8	4	17-7/8	10	4	16-1/2	12	40-170
30-184	8-3/8	4	23-5/8	7-1/8	4	22-1/8	6	40-150

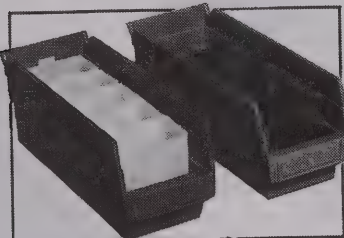
*Dividers packaged 24 per carton.

FEATURES

- Molded of durable polypropylene for years of service
- Special built-in hanglock allows easy access to the entire bin
- Wide label holder molded in
- Available in red, yellow and blue



BIN CUPS & DIVIDERS

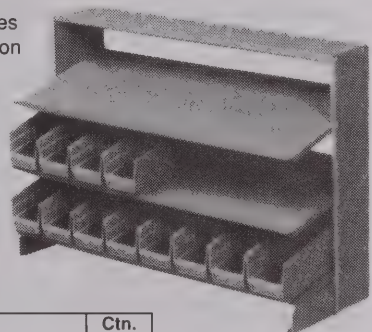


Bin cups or dividers are available to separate within each shelf bin. Dividers fit tightly across shelf bins, except the 30-110.

Bin Cups Stock No.	Fit Bin No.	Ctn. Qty.
30-101	All	48
30-102	All Except 30-110	24

SHELF BIN RACK

The Shelf Bin Rack features cold rolled steel construction with a durable baked enamel finish. Each shelf holds up to 50 lbs. The tilt design means fast part picking.



Bin Stock No.	Dimensions	Ctn. Qty.
30-312	32-1/2 L x 12 W x 23 H	1

AKROBINS 1800 SERIES

Extra large bins for longer, bulkier items.

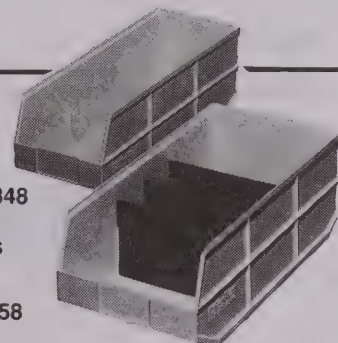
Bin Stock No.	Dimensions	Ctn. Qty.	Use Dividers Stock No.	Ctn. Qty.
30-348	20-1/2 L x 8-1/4 W x 7 H	6	40-348	6
30-358	20-1/2 L x 11 W x 7 H	6	40-358	6

FEATURES

- Molded of heavy duty copolymer
- Water, oil, and grease-proof
- Two cross-wise dividers included per bin
- Stackable

30-348

30-358





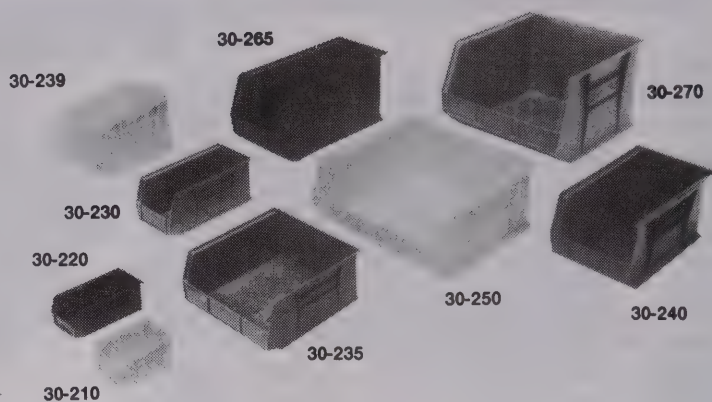
AKROBINS

Polypropylene storage bins that hang or stack.

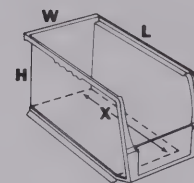
FEATURES

- AkroBins hang securely from louvered panels.*
- Extra-wide stacking ledge assures secure stacking.
- Anti-slide stop prevents loaded bins from shifting forward when stacked.
- Large label slot for clear identification.
- Reinforcing ribs prevent bins from spreading when loaded.
- Finger grips allow easy handling.

* Except for models 30-265 and 30-270



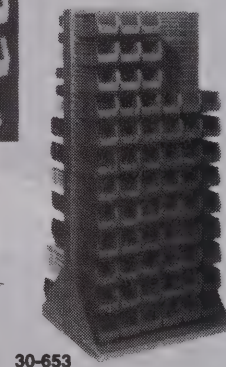
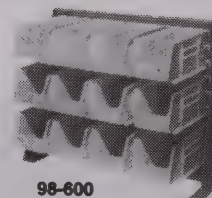
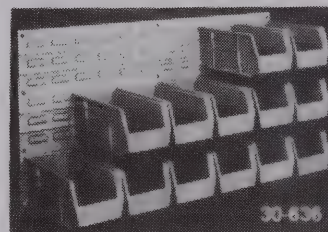
Stock No.	Inside Dimen. In.				Outside Dimen. In.				Ship. Wt. Ctn. Lbs.	Carton Qty
	L.	W.	H.	X.	L.	W.	H.			
30-210	4 ³ / ₄	3 ⁷ / ₁₆	2 ¹³ / ₁₆	4	5 ³ / ₈	4 ¹ / ₈	3		7	24
30-220	6 ³ / ₄	3 ⁷ / ₁₆	2 ¹³ / ₁₆	6	7 ³ / ₈	4 ¹ / ₈	3		8	24
30-230	10 ¹ / ₄	4 ³ / ₈	4 ³ / ₄	9	10 ⁷ / ₈	5 ¹ / ₂	5		12	12
30-235	10 ¹ / ₄	10	4 ³ / ₄	9	10 ⁷ / ₈	11	5		9	6
30-239	10	6 ⁹ / ₁₆	6 ³ / ₄	8	10 ³ / ₄	8 ¹ / ₄	7		9	6
30-240	14	6 ⁹ / ₁₆	6 ³ / ₄	12	14 ³ / ₄	8 ¹ / ₄	7		22	12
30-250	14	14 ³ / ₄	6 ³ / ₄	12	14 ³ / ₄	16 ¹ / ₂	7		18	6
30-265	17 ¹ / ₈	6 ¹ / ₂	8 ³ / ₄	14 ¹ / ₂	18	8 ¹ / ₈	9		20	6
30-270	17 ¹ / ₈	14 ⁷ / ₈	10 ³ / ₄	13 ³ / ₄	18	16 ¹ / ₂	11		13	3



BIN SYSTEMS

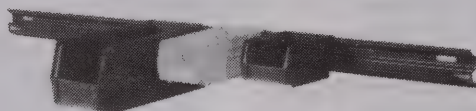
Louvered panels can be mounted on walls, or on the back of shelving. Panels provide a versatile structure that lets you build your own AkroBin system. Panels available in 18 or 36 inch widths. Two louvered racks available: Bench Rack measures 27¹/₂" x 20" x 8", holds 120 pounds. Free standing floor rack measures 35³/₄" x 32" x 75¹/₈", holds 2000 pounds.

Stock No.	Description	Dimensions			No. of Ctns.
		L.	W.	H.	
98-600	Bench Rack	27 ³ / ₄	8	21	1
30-618	Louvered Panel	18	—	19	1
30-636	Louvered Panel	35 ³ / ₄	—	19	1
30-653	Louvered Rack	35 ³ / ₄	32	75 ¹ / ₈	5



BIN RAIL

48 inches long, this steel rail holds AkroBins 30-210, 30-220, 30-230 and 30-235. May be fastened on 12" or 16" centers. Holds up to 250 lbs.



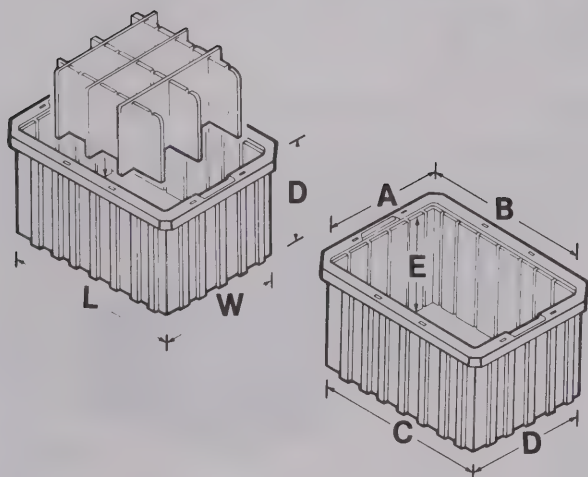
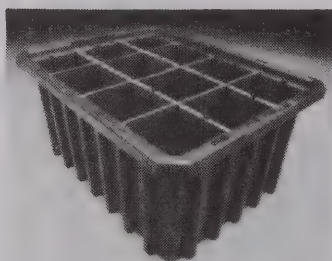
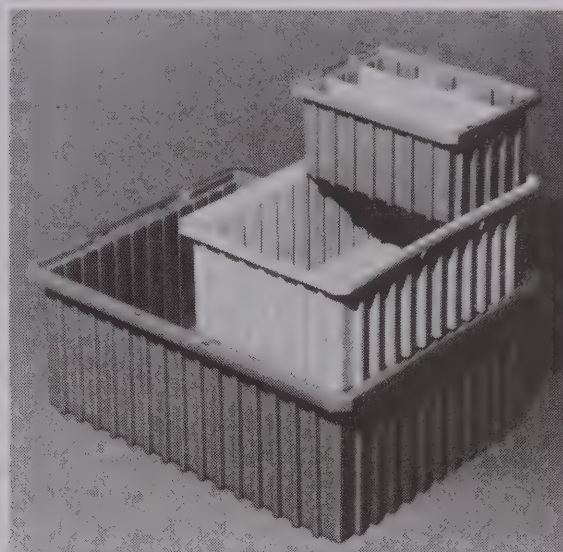
Bin Load Capacity When Attached to Panel							
Bin No.	30-210	30-220	30-230	30-235	30-239	30-240	30-250
Capacity	10 lbs.	10 lbs.	30 lbs.	60 lbs.	50 lbs.	60 lbs.	75 lbs.

AKRO-GRID

Dividable containers may be divided into compartments as small as $1\frac{1}{4}$ inches square. Dividers, clear plastic lids and label holders optional. Containers available in red, blue and gray.

FEATURES

- Dividable on $1\frac{1}{4}$ inch centers.
- Recessed stacking ledges let you stack containers without damaging contents.
- Injection molded of durable polyethylene.
- Compatible with most racks, shelving and automated material handling equipment.
- Available in red, blue, and gray. Dividers black only.



Intersecting Dividers Available

Stock No.	Description	Fits Box No.	Ctn. Qty.
33-101	Lid	Fits 33-105	10
41-105	Short Divider	Fits 33-105	6
42-105	Long Divider	Fits 33-105	6
33-161	Lid	Fits 33-166	4
41-166	Short Divider	Fits 33-166	6
42-166	Long Divider	Fits 33-166	6
33-161	Lid	Fits 33-168	4
41-168	Short Divider	Fits 33-168	6
42-168	Long Divider	Fits 33-168	6
33-221	Lid	Fits 33-228	3
41-228	Short Divider	Fits 33-228	6
42-228	Long Divider	Fits 33-228	6
35-010	Label Holder	Fits all Akro-Grids	6

Stock No.	Description	Outside Dimen. In.			Inside Dimen. In.					Ctn. Qty.
		L.	W.	D.	A	B	C	D	E	
33-105	Box	10 $\frac{7}{8}$	8 $\frac{1}{4}$	5	6 $\frac{1}{16}$	9 $\frac{3}{16}$	9 $\frac{1}{8}$	6 $\frac{1}{2}$	4 $\frac{3}{8}$	20
33-166	Box	16 $\frac{1}{2}$	10 $\frac{7}{8}$	6	9 $\frac{3}{16}$	14 $\frac{3}{8}$	14 $\frac{3}{4}$	9 $\frac{1}{8}$	5 $\frac{3}{16}$	8
33-168	Box	16 $\frac{1}{2}$	10 $\frac{7}{8}$	8	9 $\frac{3}{16}$	14 $\frac{13}{16}$	14 $\frac{3}{4}$	9 $\frac{1}{8}$	7 $\frac{3}{16}$	6
33-228	Box	22 $\frac{3}{4}$	17 $\frac{3}{8}$	8	15 $\frac{1}{8}$	20 $\frac{1}{8}$	19 $\frac{1}{8}$	14 $\frac{3}{8}$	7 $\frac{1}{8}$	3



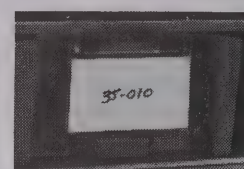
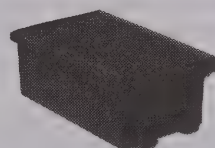
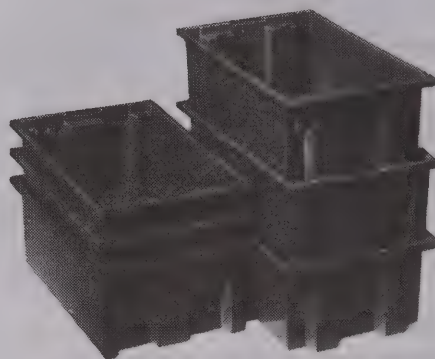
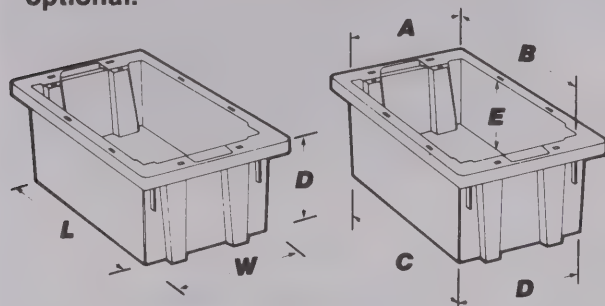
AKRO-MILS

AKRO-N.S.T.

Nest, stack, tote containers.

FEATURES

- Containers nest and stack.
- Molded of high density polyethylene, FDA approved.
- Won't rust, corrode or bend out of shape.
- Comfortable grab handles for easy carrying.
- Available in red, blue and gray. Lids optional.



Label holders fit all Akro-N.S.T.'s

Stock No.	Outside Dimen. In.			Inside Dimen. In.					Capacity Cu. Ft.	Ctn. Qty.	Lid Stock No.
	L	W	D	A	B	C	D	E			
35-180	18	11	6	10	16	15 $\frac{1}{4}$	9 $\frac{3}{8}$	5 $\frac{7}{8}$	.5	6	35-181
35-190	19 $\frac{1}{2}$	15 $\frac{1}{2}$	10	14 $\frac{1}{2}$	17	16	13 $\frac{1}{4}$	9 $\frac{7}{8}$	1.2	6	35-191
35-200	19 $\frac{1}{2}$	13 $\frac{1}{2}$	8	12 $\frac{3}{8}$	17 $\frac{1}{8}$	16 $\frac{3}{8}$	11 $\frac{1}{2}$	7 $\frac{7}{8}$	.8	6	35-201
35-230	23 $\frac{1}{2}$	19 $\frac{1}{2}$	13	18 $\frac{1}{8}$	20 $\frac{7}{8}$	19 $\frac{1}{2}$	16 $\frac{7}{8}$	12 $\frac{7}{8}$	2.6	3	35-231
35-240	23 $\frac{1}{2}$	15 $\frac{1}{2}$	12	14 $\frac{1}{4}$	20 $\frac{7}{8}$	19 $\frac{5}{8}$	13	11 $\frac{7}{8}$	1.7	3	35-241
35-300	29 $\frac{1}{2}$	19 $\frac{1}{2}$	15	18 $\frac{1}{4}$	26 $\frac{5}{8}$	25 $\frac{1}{8}$	16 $\frac{5}{8}$	14 $\frac{7}{8}$	3.7	3	35-301
35-010	Label Holder Fits all sizes Akro-N.S.T.'s										

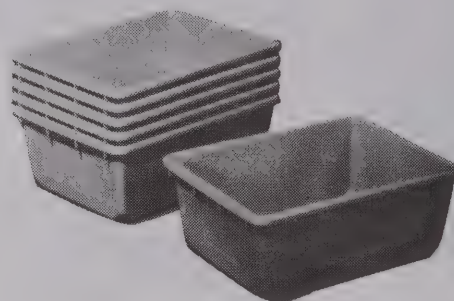
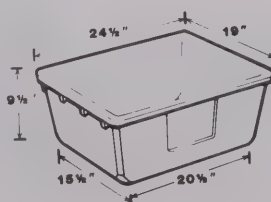
AKRO-TUB

Standard utility container for manufacturing and transportation industries. Packed 6 per carton.

FEATURES

- Molded from high density polyethylene, FDA approved.
- Molded in hand wells for easy carrying.
- Two cubic foot capacity.
- Available in gray only.

Measures 24 $\frac{1}{2}$ " L. x 19" W. x 9 $\frac{1}{2}$ " H.
Packed 6 per carton



34-240



PLASTIC INSTRUMENT BOXES

ABS FLAME RETARDANT BOXES

Molded in an improved medium impact ABS thermoplastic with flame retardant properties. Carries UL flammability rating of 94V0 at 1.47 mm thickness and a continuous use temperature rating of 60° C. Available in four colors: blue, black, gray, or beige. Comes with M3 × .5 × 10 mm phillips head screws, countersunk lid, and tapped integral brass bushings. Interlocking flange on the lid. Integral card guides accept .062" printed circuit cards. Part Number HAM-1591E has removable center brace. Comes with ABS lid in matching color. Optional clear plastic or metal lids are available.

EMI/RFI SHIELDED BOXES

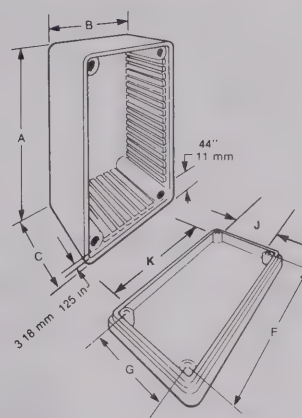
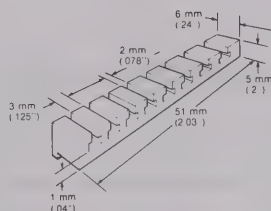
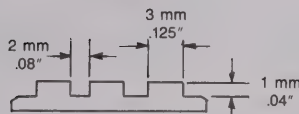
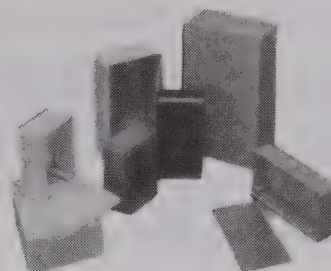
Same material, features and flame retardant properties as standard ABS boxes. EMI/RFI shielded with a nickel-acrylic conductive coating. For complete information on EMI/RFI shielding specs, ask your HdB sales team. Sold with shielded ABS lid in matching color.

OPTIONAL LIDS

Boxes are sold only with standard ABS plastic lid in matching color. Optional clear plastic or metal replacement lids may be ordered separately from "Optional Lids" below. Standard ABS lids are "no return" items and should be discarded if not used. Clear plastic lids are not shielded.

PC CARD ADAPTERS

PC adapters allow mounting of cards at right angles to the slots molded into the plastic cases.



PC CARD SLOT DIMENSIONS

PC CARD ADAPTER

STANDARD ABS BOX & LID PART NUMBER †	EMI/RFI SHIELDED BOX & LID PART NUMBER †	DIMENSIONS								OPTIONAL CLEAR LID (††) PART NUMBER	OPTIONAL METAL LID PART NUMBER
		A	B	C	F	G	J	K			
1591L	1591RL	85 3.34	56 2.20	35 1.38	71 2.79	42 1.65	34 1.34	63 2.48	mm inch	1591LC	1591LM
1591A	1591RA	100 3.93	50 1.97	21 .82	86 3.38	36 1.42	28 1.10	78 3.07	mm inch	1591AC	1591AM
1591B	1591RB	112 4.41	62 2.44	27 1.06	98 3.86	48 1.89	40 1.57	90 3.54	mm inch	1591BC	1591BM
1591C	1591RC	120 4.72	65 2.55	36 1.41	106 4.17	51 2.0	43 1.62	98 3.86	mm inch	1591CC	1591CM
1591D	1591RD	150 5.90	80 3.14	46 1.80	136 5.35	66 2.59	58 2.28	128 5.04	mm inch	1591DC	1591DM
1591E	1591RE	190 7.47	110 4.33	57 2.24	176 6.92	96 3.78	88 3.46	168 6.61	mm inch	1591EC	1591EM
1591G	1591RG	121 4.75	94 3.69	30 1.18	106 4.17	79 3.11	71 2.80	98 3.86	mm inch	1591GC	1591GM
1591H	1591RH	166 6.52	71 2.78	25 .98	151 5.94	56 2.20	48 1.89	143 5.63	mm inch	1591HC	1591HM
1591S	1591RS	110 4.33	82 3.23	40 1.58	96 3.78	68 2.67	60 2.36	88 3.46	mm inch	1591SC	1591SM
1591T	1591RT	120 4.72	80 3.15	55 2.17	106 4.17	66 2.60	58 2.28	98 3.86	mm inch	1591TC	1591TM
1591U	1591RU	120 4.72	120 4.72	55 2.17	106 4.17	106 4.17	98 3.85	98 3.86	mm inch	1591UC	1591UM
1591V	1591RV	120 4.72	120 4.72	90 3.54	106 4.17	106 4.17	98 3.85	98 3.86	mm inch	1591VC	1591VM

† Specify color with the following suffixes: BK=Black, BU=Blue, GY=Grey, BG=Beige

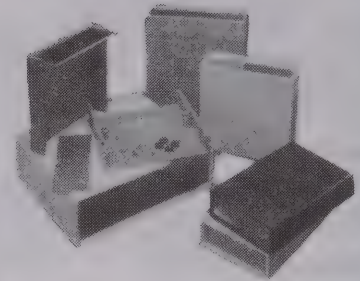
†† Clear plastic lids are not EMI/RFI shielded.



PLASTIC INSTRUMENT CASES

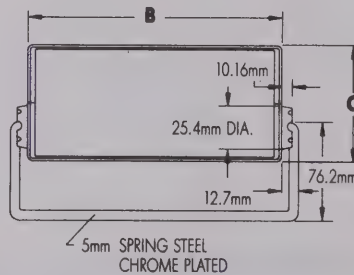
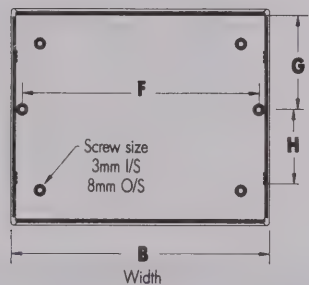
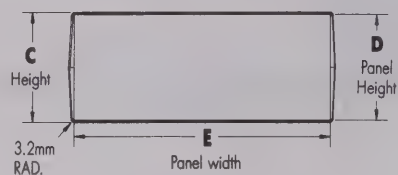
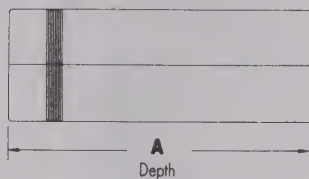
ABS FLAME RETARDANT CASES

Two piece tongue and groove construction. Molded in flame retardant ABS plastic with matte finish. Carries UL flammability rating of 94W at 1.47 mm thickness and a continuous use temperature rating of 60° C. Comes in colors: blue, black, gray and beige. Comes with M3 × .5 × 10 mm phillips head screws, countersunk lid, and tapped integral brass bushings. Front and rear panels are .064" thick brushed aluminum. Case provided with integral horizontal printed circuit board mounts on Eurocard centers. Four self adhesive clips supplied. Two sets of vertical printed circuit card slots provided front and rear. Four self adhesive rubber feet included. Optional tilt handle available.

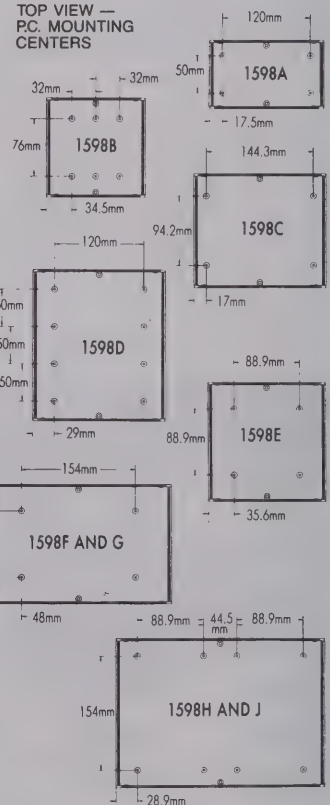


EMI/RFI SHIELDED CASES

Same material, features and flame retardant properties as standard ABS cases. EMI/RFI shielded with a nickel-acrylic conductive coating. For complete information on EMI/RFI shielding specs, ask your HdB sales person.



TOP VIEW —
PC MOUNTING
CENTERS



STANDARD ABS CASE PART NUMBER †	EMI/RFI SHIELDED CASE PART NUMBER †	DIMENSIONS								OPTIONAL TILT HANDLE PART NUMBER
		A	B	C	D	E	F	G	H	
1598A	1598RA	155 6.10	92 3.62	35 1.38	22 .87	80 3.15	70 2.76	72 2.84	55 2.17	N/A
1598B	1598RB	133 5.24	133 5.24	51 2.01	38 1.50	121 4.76	111 4.37	60 2.36	44 1.73	N/A
1598C	1598RC	178 7.01	153 6.02	51 2.01	38 1.50	141 5.55	131 5.16	83 3.27	67 2.62	1598TH153
1598D	1598RD	178 7.01	203 7.99	63 2.48	50 1.97	191 7.52	181 7.13	83 3.27	67 2.62	1598TH203
1598E	1598RE	160 6.30	160 6.30	85 3.35	72 2.84	148 5.83	138 5.43	75 2.93	58 2.26	1598TH160
1598F	1598RF	250 9.84	160 6.30	40 1.58	27 1.06	148 5.83	138 5.43	120 4.71	90 3.54	1598TH160
1598G	1598RG	250 9.84	160 6.30	75 2.95	62 2.44	148 5.83	138 5.43	120 4.71	90 3.54	1598TH160
1598H	1598RH	280 11.02	200 7.87	40 1.58	27 1.06	188 7.40	178 7.01	135 5.29	125 4.90	1598TH200
1598J	1598RJ	280 11.02	200 7.87	75 2.85	62 2.44	188 7.40	178 7.01	135 5.29	125 4.90	1598TH200

† Specify color with the following suffixes: BK=Black, BU=Blue, GY=Grey, BG=Beige



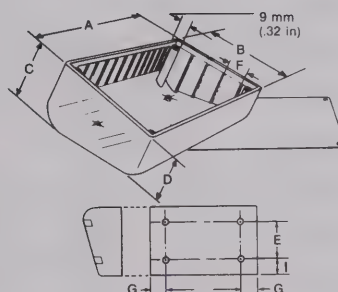
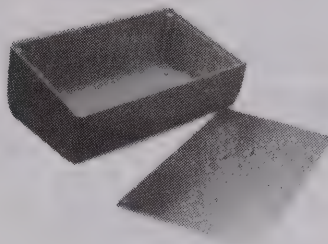
PLASTIC INSTRUMENT BOXES

ABS FLAME RETARDANT CONSOLES

Two styles, each in four colors: blue, black, grey, or turf brown. Case molded in an improved medium impact ABS thermoplastic with flame retardant properties. Comes with M3 x .5 x 10 mm phillips head screws threaded into integral brass bushings which hold recessed panel into sloping front of case. Rated for continuous use at 70° C. Includes .040" thick unpainted aluminum panel. Internal slots for mounting standard .062" thick printed circuit boards. Four self adhesive rubber feet included.

PART NUMBER †	DIMENSIONS									
	A	B	C	D	E	F	G	H	I	
1595C	161 6.34	96 3.78	58 2.28	40 1.56	62 2.45	16 .625	22 .860	16 .625	10 .400	mm inch
1595C	215 8.46	130 5.12	75 2.95	52 2.03	85 3.35	27 1.07	22 .860	25 1.00	10 .40	mm inch

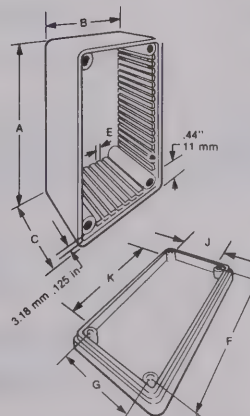
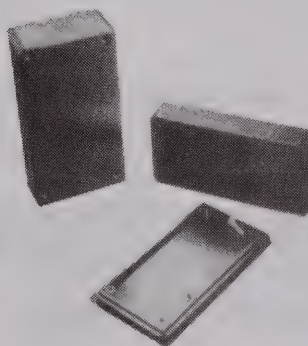
† Specify color with the following suffixes: BK=Black, BU=Blue, GY=Grey, BG=Beige



ECONOMY STYRENE BOXES

A rugged small case molded in high impact Styrene Plastic. Comes with four self-tapping #4 x 1/2 flat head screws. Standard stock items are available in black only. Custom colors available for large volume orders. Optional RF shielded version available on special request. Lid adds 4.0mm / .156" to overall depth of box. Internal slots for mounting standard .062" thick printed circuit boards.

PART NUMBER	DIMENSIONS					MAX PC CARD		
	A	B	C	F	G	J	K	
1591LSBK	85 3.34	56 2.20	35 1.38	71 2.79	42 1.65	34 1.34	63 2.48	mm inch
1591ASBK	100 3.93	50 1.97	21 .82	86 3.38	36 1.42	28 1.10	78 3.07	mm inch
1591BSBK	112 4.41	62 2.44	27 1.06	98 3.86	48 1.89	40 1.57	90 3.54	mm inch
1591CSBK	120 4.72	65 2.55	36 1.41	106 4.17	51 2.0	43 1.62	98 3.86	mm inch
1591DSBK	150 5.90	80 3.14	46 1.80	136 5.35	66 2.59	58 2.28	128 5.04	mm inch
1591ESBK	190 7.47	110 4.33	57 2.24	176 6.92	96 3.78	88 3.46	168 6.61	mm inch
1591GSBK	121 4.75	94 3.69	30 1.18	106 4.17	79 3.11	71 2.80	98 3.86	mm inch
1591HSBK	166 6.52	71 2.78	25 .98	151 5.94	56 2.20	48 1.89	143 5.63	mm inch
1591SSBK	110 4.33	82 3.23	40 1.58	96 3.78	68 2.67	60 2.36	88 3.46	mm inch
1591TSBK	120 4.72	80 3.15	55 2.17	106 4.17	66 2.60	58 2.28	98 3.86	mm inch
1591USBK	120 4.72	120 4.72	55 2.17	106 4.17	106 4.17	98 3.85	98 3.86	mm inch
1591VSBK	120 4.72	120 4.72	90 3.54	106 4.17	106 4.17	98 3.85	98 3.86	mm inch





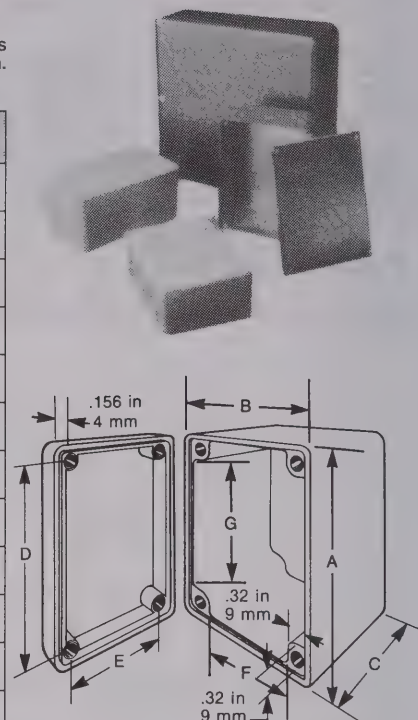
DIECAST METAL BOXES

DIECAST ALUMINUM ALLOY BOXES

Boxes are diecast aluminum alloy, drilled and tapped with lid and four 6-32 $\times$ 1/2" counter sunk phillips screws. Interlocking flanged lid provides complete RF shielding. Standard finish is natural aluminum. Also available in four colors: blue, black, gray, or beige textured baked enamel.

PART NUMBER †	DIMENSIONS							
	A	B	C	D	E	F	G	
1590A	92 3.63	39 1.52	27 1.07	82 3.24	28 1.12	21 0.84	75 2.96	mm inch
1590B	111 4.37	60 2.37	27 1.07	101 3.99	51 1.99	44 1.74	95 3.75	mm inch
1590BB	119 4.70	94 3.70	30 1.18	109 4.31	84 3.31	74 2.92	99 3.89	mm inch
1590C	119 4.72	94 3.70	52 2.06	109 4.31	84 3.31	73 2.86	98 3.86	mm inch
1590D	188 7.39	120 4.72	52 2.06	178 7.00	109 4.31	99 3.89	167 6.59	mm inch
1590E	188 7.39	120 4.72	78 3.06	178 7.00	109 4.31	97 3.82	167 6.59	mm inch
1590F	188 7.41	188 7.41	64 2.50	178 7.00	178 7.00	167 6.59	167 6.59	mm inch
1590LB	50 1.98	50 1.98	27 1.07	41 1.60	41 1.60	34 1.34	34 1.34	mm inch
1590S	110 4.33	82 3.23	40 1.58	101 3.96	72 2.85	64 2.53	91 3.60	mm inch
1590T	120 4.72	80 3.15	55 2.17	111 4.35	71 2.78	61 2.42	100 3.95	mm inch
1590U	120 4.72	120 4.72	55 2.17	111 4.35	111 4.35	98 3.85	98 3.85	mm inch
1590V	120 4.72	120 4.72	90 3.54	111 4.35	111 4.35	98 3.85	98 3.85	mm inch

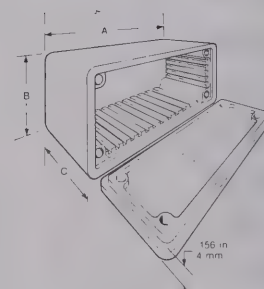
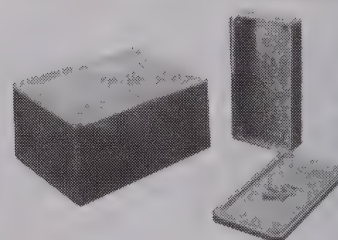
† Specify color with the following suffix: Blank=Natural, BK=Black, BU=Blue, GY=Grey, BG=Beige



PC CARD ALUMINUM ALLOY DIECAST BOXES

Boxes come with 3mm slot head screws, countersunk into lid and threaded in tapped holes. Rated to 600° C (1112° F). Interlocking flanged lid. Internal slots on 0.2" centers hold standard .062" thick printed circuit cards or dividers.

PLAIN ALUMINUM PART NUMBER	GRAY PAINTED PART NUMBER	DIMENSIONS			
		A	B	C	
1590L	1590L-P	4.00 102	2.00 51	1.00 25	mm inch
1590M	1590M-P	4.40 112	2.44 62	1.22 31	mm inch
1590N	1590N-P	4.75 121	2.56 65	1.56 40	mm inch
1590P	1590P-P	6.00 152	3.15 80	2.00 51	mm inch
1590R	1590R-P	7.50 191	4.33 110	2.38 61	mm inch



Average wall thickness 0.062" (1.6 mm)
For Hammett grey painted series,
add suffix "P" to part number

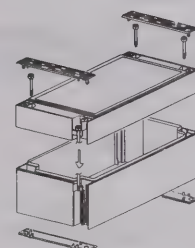
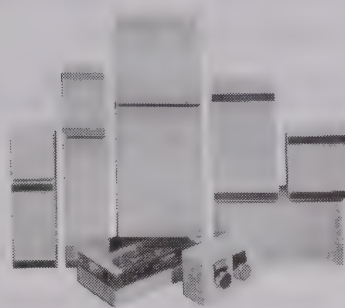
**WE HAVE ACCESS TO A NATIONAL WAREHOUSE
THROUGH OUR BUYING GROUP ASSOCIATION.**

INDUSTRIAL GRADE PLASTIC CASES

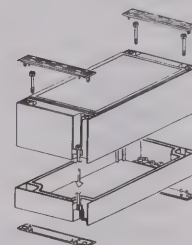
ROLEC TECHNOCASE

A high quality enclosure featuring many options. Reversible bottom and cover sections. Recessed polyurethane gasket provides water and dust tight protection, making them suitable for very harsh environments. Three basic styles offered: flame retardant ABS grey plastic, flame retardant hi-temp polycarbonate grey plastic, and polycarbonate grey plastic with clear lid. Interlocking flange on cover and bottom. Captive stainless steel fastening screws that go into tapped holes. Snap on screw covers for a clean, finished appearance. Optional accessories include: recessed front plates, internal hinges, mounting feet, and pcb supports.

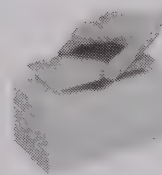
GREY ABS PART NUMBER	GREY POLYCARBONATE PART NUMBER	GREY/CLEAR LID POLYCARBONATE PART NUMBER	DIMENSIONS			
			A	B	C	
R200-080-000	R210-080-000	R205-080-000	80 3.15	80 3.15	60 2.36	mm inch
R201-080-000	R211-080-000	R206-080-000	80 3.15	80 3.15	80 3.15	mm inch
R200-082-000	R210-082-000	R205-082-000	80 3.15	120 4.72	60 2.36	mm inch
R201-082-000	R211-082-000	R206-082-000	80 3.15	120 4.72	80 3.15	mm inch
R200-084-000	R210-084-000	R205-084-000	80 3.15	160 6.30	60 2.36	mm inch
R201-084-000	R211-084-000	R206-084-000	80 3.15	160 6.30	80 3.15	mm inch
R200-086-000	R210-086-000	R205-086-000	80 3.15	240 9.45	60 2.36	mm inch
R201-086-000	R211-086-000	R206-086-000	80 3.15	240 9.45	80 3.15	mm inch
R200-120-000	R210-120-000	R205-120-000	120 4.72	120 4.72	60 2.36	mm inch
R201-120-000	R211-120-000	R206-120-000	120 4.72	120 4.72	90 3.54	mm inch
R200-122-000	R210-122-000	R205-122-000	120 4.72	200 7.87	60 2.36	mm inch
R201-122-000	R211-122-000	R206-122-000	120 4.72	200 7.87	90 3.54	mm inch
R200-124-000	R210-124-000	R205-124-000	120 4.72	240 9.45	60 2.36	mm inch
R201-124-000	R211-124-000	R206-124-000	120 4.72	240 9.45	90 3.54	mm inch
R200-160-000	R210-160-000	R205-160-000	160 6.30	160 6.30	60 2.36	mm inch
R201-160-000	R211-160-000	R206-160-000	160 6.30	160 6.30	90 3.54	mm inch
R200-162-000	R210-162-000	R205-162-000	160 6.30	240 9.45	60 2.36	mm inch
R201-162-000	R211-162-000	R206-162-000	160 6.30	240 9.45	90 3.54	mm inch



STANDARD ASSEMBLY



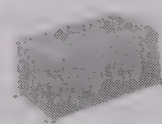
REVERSE ASSEMBLY



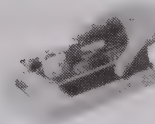
RECESSED
FRONTPLATES



INTERNAL
HINGES



MOUNTING
FEET



PCB
SUPPORTS

ACCESSORY SELECTION TABLE				
FRONT PLATE	INTERNAL HINGE	MOUNTING FEET	PCB SUPPORT	SIZE
542-000-080	546-000-000	541-000-000	543-000-001	080
542-000-082	546-000-000	541-000-000	543-000-001	082
542-000-084	546-000-000	541-000-000	543-000-001	084
542-000-086	546-000-000	541-000-000	543-000-001	086
542-000-120	546-000-000	541-000-000	543-000-000	120
542-000-122	546-000-000	541-000-000	543-000-000	122
542-000-124	546-000-000	541-000-000	543-000-000	124
542-000-160	546-000-000	541-000-000	543-000-001	160
542-000-164	546-000-000	541-000-000	543-000-001	164

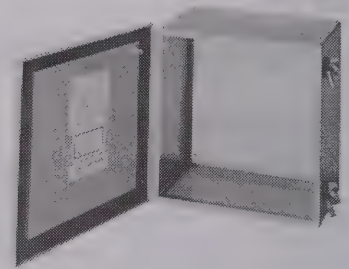
**CALL US FOR INFORMATION
ON ANY UNLISTED PARTS OR EQUIPMENT.**



NEMA / EEMAC ENCLOSURES

1414 PH STEEL SERIES

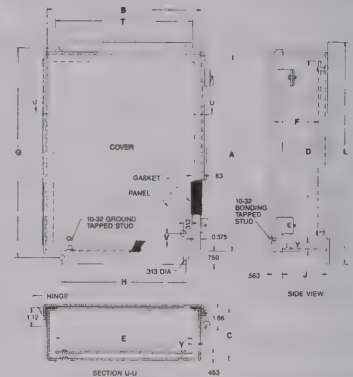
Continuous hinge with clamped cover designed for use as instrument or control enclosures. Formed and welded from 16 or 14 ga steel. Finished in ASA 61 GRAY recoatable enamel. Oil resistant gasket provides harsh environment protection. Weldnuts are provided for mounting inner panels. Inner mounting panel is included.



1414 N4 PHSS STAINLESS STEEL SERIES

Continuous hinge with clamped cover designed for use as instrument or control enclosures. Formed and welded from 14 ga Type 304 stainless steel. Finished in natural brushed finish. Oil resistant gasket provides harsh environment protection. Weldnuts are provided for mounting inner panels. Inner mounting panel is included.

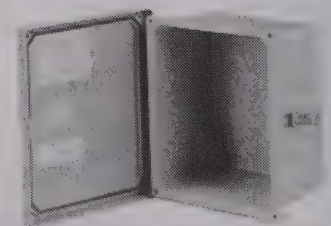
1414 PH STEEL PART NUMBER	1414 PH STAINLESS PART NUMBER	INSIDE DIMENSIONS			PANEL SIZE	
		HEIGHT	WIDTH	DEPTH	HEIGHT	WIDTH
1414PHA	-	4	4	3	-	-
1414PHC	-	6	4	3	4.88	2.88
1414PHG	1414N4PHSSG	8	6	3.5	6.75	4.88
1414PHRG	-	6	8	3.5	4.88	6.75
1414PHA4	-	4	4	4	-	-
1414PHC4	1414N4PHSSC4	6	4	4	4.88	2.88
1414PHE	1414N4PHSSE	6	6	4	4.88	4.88
1414PHH4	-	8	8	4	6.75	6.88
1414PHI	1414N4PHSSI	10	8	4	8.75	6.88
1414PHRI	-	8	10	4	6.88	8.75
1414PHKC4	-	12	6	4	10.75	4.88
1414PHK	1414N4PHSSK	12	10	5	10.75	8.88
1414PHRK	-	10	12	5	8.88	10.75
1414PHG6	-	8	6	6	6.75	4.88
1414PHI6	-	10	8	6	8.75	6.88
1414PHJ6	-	10	10	6	8.75	8.88
1414PHL6	1414N4PHSSL6	12	12	6	10.75	10.88
1414PHMH6	-	14	8	6	12.75	6.88
1414PHM6	-	14	12	6	12.75	10.88
1414PHRM6	1414N4PHSSM6	12	14	6	10.88	12.75
1414PHN6	-	16	10	6	14.75	8.88
1414PHO6	-	16	14	6	14.75	12.88
1414PHRO6	1414N4PHSSO6	14	16	6	12.88	14.75
1414PHK8	-	12	10	8	10.75	8.88
1414PHM8	1414N4PHSSM8	14	12	8	12.75	10.88
1414PHO8	-	16	14	8	14.75	12.88
1414PHO10	1414N4PHSSO10E	16	14	10	14.75	12.88



PJ FIBERGLASS POLYESTER SERIES

Molded fiberglass polyester with hinged cover and snap latches designed for use as instrument or control enclosures. Oil resistant gasket provides harsh environment protection. Threaded brass inserts are provided for mounting inner panels and included stainless mounting brackets.

ENCLOSURE PART NUMBER	OPTIONAL PANEL PART NUMBER	INSIDE DIMENSIONS			PANEL SIZE	
		HEIGHT	WIDTH	DEPTH	HEIGHT	WIDTH
PJ664L	14R0505	7.04	7.04	4.18	4.88	4.88
PJ864L	14R0707	8.94	7.06	4.13	6.75	4.88
PJ1086L	14R0907	11.08	9.20	6.13	8.75	6.88
PJ12106L	14R1109	13.08	11.20	6.13	10.75	8.88
PJ14126L	14R1311	15.08	13.20	6.13	12.75	10.88
PJ16148L	14R1513	17.22	15.34	8.13	14.75	12.88



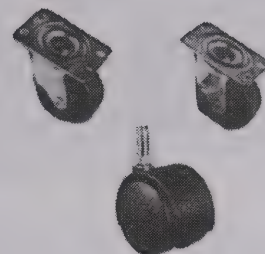


ACCESSORIES & FASTENERS

CASTERS

Casters come in sets of four with mounting hardware. Both ball bearing with composition wheels and nylon swivel type are available.

PART NUMBER	DESCRIPTION
1425A	CASTERS, BALL BEARING, 2" DIA WHEEL, 600 LB CAP PER SET OF 4
1425B	CASTERS, BALL BEARING, 3" DIA WHEEL, 360 LB CAP PER SET OF 4
1425C	CASTERS, BALL BEARING, 4" DIA WHEEL, 460 LB CAP PER SET OF 4
1425D	CASTERS, BALL BEARING, 4" DIA WHEEL, 800 LB CAP PER SET OF 4
1425P	CASTERS, SWIVEL TYPE, 2.37" DIA WHEEL, 400 LB CAP PER SET OF 4



SCREWS AND WASHERS

The following is a selection of the fasteners used with various Hammond enclosure products. Use the part numbers to order extra fasteners.

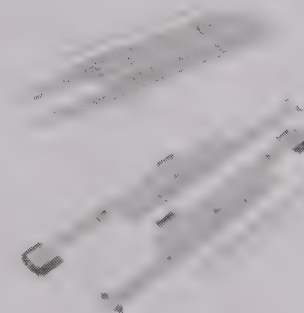
PART NUMBER	DESCRIPTION
1421E25B	SCREWS, 10-32 X .5", CNTSNK SLOT OVAL NICKEL PLT, 25 / PKG
1421E100B	SCREWS, 10-32 X .5", CNTSNK SLOT OVAL NICKEL PLT, 100 / PKG
1421A25B	SCREWS, 10-32 X .75", CNTSNK PHIL OVAL NICKEL PLT, 25 / PKG
1421A100B	SCREWS, 10-32 X .75", CNTSNK PHIL OVAL NICKEL PLT, 100 / PKG
1421F25B	SCREWS, 10-32 X 1.25", CNTSNK PHIL OVAL STAINLESS, 25 / PKG
1421E25W	WASHERS FOR #10 CNTSNK SCREW, NICKEL PLT, 25 / PKG
1421E100W	WASHERS FOR #10 CNTSNK SCREW, NICKEL PLT, 100 / PKG
1421A25W	WASHERS FOR #10 CNTSNK SCREW, BLK PLASTIC, 25 / PKG
1421A100W	WASHERS FOR #10 CNTSNK SCREW, BLK PLASTIC, 100 / PKG
1421N25	CLIP NUTS, 10-32, BLACK OXIDE, 25 / PKG
1421N50	CLIP NUTS, 10-32, BLACK OXIDE, 50 / PKG
1421N100	CLIP NUTS, 10-32, BLACK OXIDE, 100 / PKG
1421NP25	CLIP NUTS, 10-32, ZINC PLATED, 25 / PKG
1421NP100	CLIP NUTS, 10-32, ZINC PLATED, 100 / PKG



RACK MOUNT EQUIPMENT SLIDES

Both light duty and heavy duty slides are available. Light duty should be used for equipment of 1-3/4" or more in height and up to 50 lbs load. Heavy duty should be used for equipment of 4" or more in height and up to 150 lbs load. Sold in pairs.

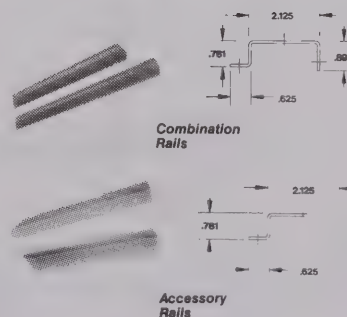
PART NUMBER	DESCRIPTION
RASS0500116	LIGHT DUTY SLIDES, 16" LONG, 50 LBS MAX LOAD / PAIR
RASS0500122	LIGHT DUTY SLIDES, 22" LONG, 42 LBS MAX LOAD / PAIR
RASS0500316	HEAVY DUTY SLIDES, 16" LONG, 150 LBS MAX LOAD / PAIR
RASS0500322	HEAVY DUTY SLIDES, 22" LONG, 130 LBS MAX LOAD / PAIR



RACK RAILS

Combination rails may be used to mount both panels and/or accessories. Accessory rails are used only for mounting accessories inside of racks. Made of 14 ga steel and prepunched with full EIA hole spacing of 5/8" - 5/8" - 1/2" to be used with clip nuts as shown above. Finished in BK3 black satin paint. Sold in pairs with mounting hardware.

COMBINATION RAIL PART NUMBER	ACCESSORY RAIL PART NUMBER	FOR PANEL HEIGHT IN.	UNITS
DNCR63PBK3	DNAR63PBK3	63	36
DNCR70PBK3	DNAR70PBK3	70	40
DNCR78PBK3	DNAR78PBK3	78	45



**BE SURE TO WATCH FOR OUR
"POWER SOURCE" BROCHURES.**



HAND HELD CASES

HAND HELD PLASTIC CASES

Attractively styled and ergonomically designed for use as a "Hand-Held" instrument enclosure. Molded in both flame retardant ABS with brass inserts or high impact polystyrene with self tapping screws. ABS enclosures are secured by M3 slot head machine screws which fasten into integral brass bushings. This not only provides extra strength, but also allows repeated assembly and disassembly without damage to the enclosure. Polystyrene enclosures are secured by self-tapping screws.

CONSTRUCTION & FEATURES

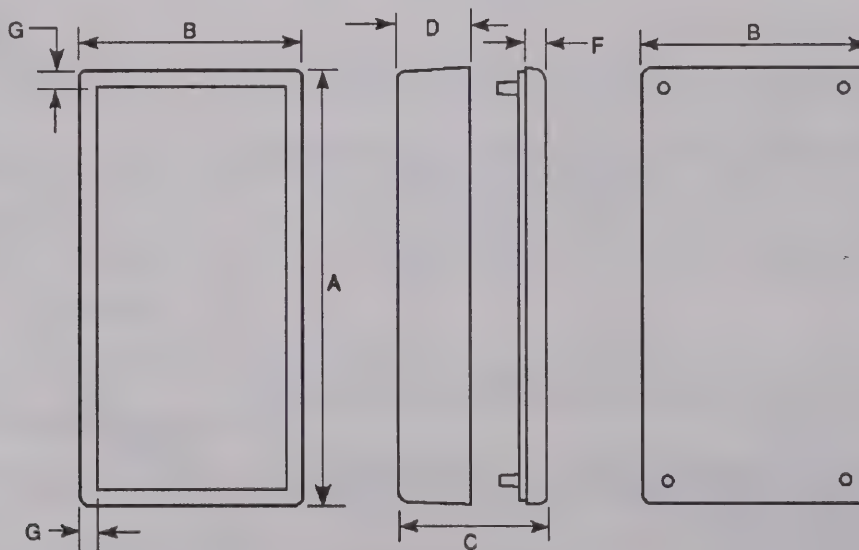
Extra deep top and ultra shallow base specifically designed to both enhance the aesthetics of the enclosure and to improve both user flexibility and assembly efficiency. Two piece lap joint construction with four fastening screws provides protection against dust and splashed water. This also provides an improved surface for EMI/RFI shielding. The recessed top panel is ideal for membrane displays. Internal, universal battery compartment is suitable for most battery requirements. "User Friendly" 10mm x 10 mm reference grids are molded into the insides of the top. Two keyhole knockouts are molded onto the inside of the base to facilitate wall mounting installations. Six PCB mounting slots are molded onto the walls at the top. These can be used for either vertical PCB mounting or to insert internal dividing panels. Lightly textured finish to resist scratching. ABS enclosures are available as standard in both black and light gray. Polystyrene enclosures are available as standard in light gray only.

CUSTOMIZATION

Can be molded in virtually any color with production quantities. These enclosures can be provided with EMI/RFI shielding. Hole punching and custom machining is available. Silk screening or other marking is available.

ABS PLASTIC PART NUMBER †	POLYSTYRENE PART NUMBER	DIMENSIONS						
		A	B	C	D	F	G	
1599B	1599BSGY	130	65	25	17.5	7	6.4	mm
		5.12	2.56	.98	.69	.28	.25	inch
1599E	1599ESGY	170	85	35	26	8	7	mm
		6.70	3.35	1.38	1.03	.32	.27	inch
1599H	1599HSGY	220	110	45	35	9	7.6	mm
		8.60	4.33	1.77	1.38	.36	.30	inch

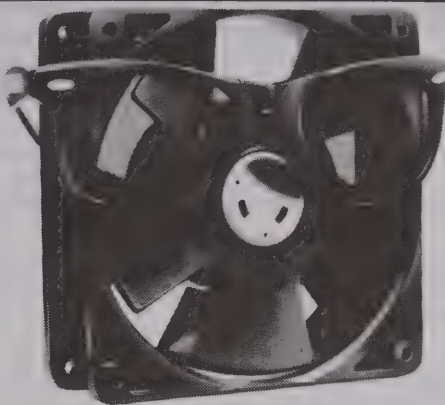
† Specify color with the following suffixes: BK=Black, GY=Grey



ASSEMBLED HEIGHT

**INTERFAN OFFERS YOU A FULL
FAMILY OF FANS IN POPULAR
FRAME SIZES AND VOLTAGES.**

**QUALITY PRODUCTS YOU CAN
RELY UPON FOR ALL OF YOUR
COOLING REQUIREMENTS**



MODEL	VOLTAGE	AIRFLOW	INPUT	SPEED	NOISE	LIFE	WEIGHT	FRAME SIZE	CONSTRUCTION
	VAC	CFM	POWER		LEVEL	EXPECTANCY		H X W X D INCHES (mm)	
PM018-115-3B	115	18	8.5	2600	33	20K AT 70	7	3.2 X 3.2 X 0.8 (80 X 80 X 20)	die cast alum hsg, plastic impeller, ball bearing, 22 AWG wire leads
PM024-115-3B	115	24	7	3050	36	20K AT 70	8	3.2 X 3.2 X 1.0 (80 X 80 X 25)	die cast alum hsg, plastic impeller, ball bearing, 22 AWG wire leads
PM024-230-3B	230			3100					
MM032-230-3B	230	32	12	3300	40	20K AT 70	16	3.2 X 3.2 X 1.5 (80 X 80 X 38)	all metal, ball bearing, 24 AWG wire leads
PM032-115-3B-7	115	34	6.9	3300	38	10K AT 70	9.5	3.2 X 3.2 X 1.5 (80 X 80 X 38)	alum alloy hsg, plastic impeller, ball bearing, terminal block
PM040-115-3B	115	40	9.5	3100	36	20K AT 70	10	3.6 X 3.6 X 1.0 (92 X 92 X 25)	die cast alum hsg, plastic impeller, ball bearing, terminal block
PM040-230-3B	230		11						
PM058-115-4B	115	58	11	2350	39	20K AT 70	10	4.7 X 4.7 X 0.8 (120 X 120 X 20.3)	die cast alum hsg, plastic impeller, ball bearing, 22 AWG wire leads
PM058-230-4B	230		14.5	2500					
MM060-230-4B	230	60	9	2100	38	20K AT 70	19	4.7 X 4.7 X 1.5 (120 X 120 X 38)	all metal, ball bearing, terminal block
PM074-115-4B	115	74	11.5	2900	43	20K AT 70	15	4.7 X 4.7 X 1.0 (120 X 120 X 25)	die cast alum hsg, plastic impeller, ball bearing, terminal block
PM074-230-4B	230		12						
PM106-115-4B-7	115	106	13	3200	46	10K AT 70	20	4.7 X 4.7 X 1.5 (120 X 120 X 38)	alum alloy hsg, plastic impeller, ball bearing, terminal block
PM106-230-4B-7	230								
MM235-115-6B	115	235	38	3350	53	20K X 70	43	6.8 DIA X 2 (172 DIA X 55)	all metal, ball bearing, 20 AWG wire leads
MM235-230-6B	230		37.5						
PMB24-115-4B	115	24	20	2300	53	20K AT 70	23	4.8 X 4.8 X 1.5 (120 X 120 X 38)	plastic hsg, plastic wheel, ball bearing, 20 AWG wire leads
PMB24-230-4B	230								

NOTE: ALL AC FANS AND BLOWERS ARE 50/60 Hz. SPECIFICATIONS ARE AT 60 Hz.



INTERFAN
ONE OF THE PURDY GROUP OF COMPANIES

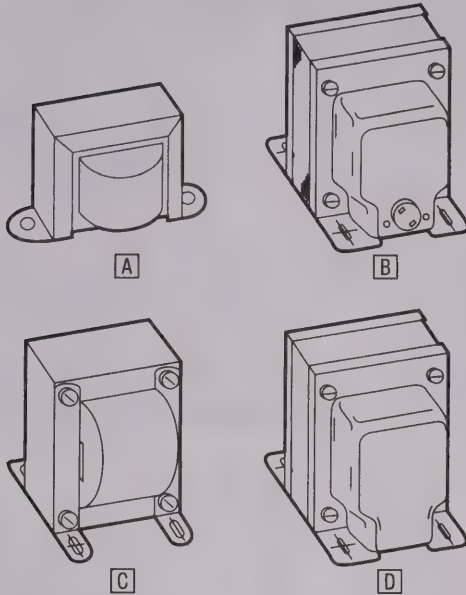
DC FANS and BLOWERS

Fans and Blowers

MODEL	VOLTAGE VDC NOM.	AIRFLOW (0 STATIC PRESSURE) CFM NOM.	INPUT CURRENT mA NOM.	INPUT POWER WATTS NOM.	SPEED RPM NOM.	NOISE LEVEL dB(A) NOM.	WEIGHT OZS.	FRAME SIZE H X W X D INCHES (mm)	CONSTRUCTION
PO003-12D-1B-3	12	3.5	100	1.2	5200	30	0.7	1.6 X 1.6 X 0.4 (40 X 40 X 10)	plastic housing and impeller, ball bearing, 26 AWG wire leads
P0005-12D-1B-3	12	5.0	150	1.8	6000	35	1.2	1.6 X 1.6 X 0.8 (40 x 40 x 20)	plastic housing and impeller, ball bearing, 26 AWG wire leads
P0005-24D-1B-3	24		100	2.4					
PO012-12D-2B-7	12	12	80	0.96	3000	24	3.2	2.4 X 2.4 X 1.0 (60 X 60 X 25)	plastic housing and impeller, ball bearing, 24 AWG wire leads
PO012-24D-2B-7	24		40						
P0014-12D-2B-3	12	14	200	2.4	3700	30	1.5	2.5 x 2.5 x 0.6 (62 x 62 x 15)	plastic housing and impeller, ball bearing, 26 AWG wire leads
P0014-24D-2B-3	24		100						
P0020-24D-3B	24	20	70	2.0	2250	33	5.3	3.2 x 3.2 x 1.3 (80 x 80 x 32)	plastic housing and impeller, ball bearing, 24AWG wire leads
P0022-12D-3B-3	12	22	200	2.4	3000	32	4.0	3.6 x 3.6 x 0.6 (92 x 92 x 15.5)	plastic housing and impeller, ball bearing, 26 AWG wire leads
P0022-24D-3B-3	24		100	2.4					
PO025-12D-3B-7	12	27	80	0.96	2150	23	3.6	3.2 x 3.2 x 1.0 (80 X 80 X 25.4)	plastic housing and impeller, ball bearing, 24 AWG wire leads
PO025-24D-3B-7	24		70	1.68					

MODEL	voltage VDC NOM.	AIRFLOW (0 STATIC PRESSURE) CFM NOM.	INPUT CURRENT mA NOM.	INPUT POWER WATTS NOM.	SPEED RPM NOM.	NOISE LEVEL dB(A) NOM.	WEIGHT OZS.	FRAME SIZE H X W X D INCHES (mm)	CONSTRUCTION
PO035-12D-3B-7	12	35	150	1.8	2950	32	3.6	3.2 X 3.2 X 1.0 (80 X 80 X 25.4)	plastic housing and impeller, ball bearing, 24 AWG wire leads
PO035-24D-3B-7	24		90	2.2					
PO040-12D-3B	12	40	180	2.2	3200	38	5.3	3.6 X 3.6 X 1.0 (92 X 92 X 25)	plastic housing and impeller, ball bearing, 24 AWG wire leads
PO040-24D-3B	24		115	2.9	3350				
PM082-12D-4B	12	82	560	6.7	3200	45	9	4.7 X 4.7 X 1.0 (120 X 120 X 25)	die cast alum hsg, plastic impeller, ball bearing, 24 AWG wire leads
PM082-24D-4B	24		300	7.5	3250				
PM106-12D-4B-7	12	100	500	6	2800	41	14.2	4.7 X 4.7 X 1.5 (120 X 120 X 38)	alum alloy hsg, plastic impeller, ball bearing, 24 AWG wire leads
PM106-24D-4B-7	24		300	7.2					
PM106-12D-4BT-7	12	100	500	6	2800	41	14.2	4.7 X 4.7 X 1.5 (120 X 120 X 38)	alum alloy hsg, plastic impeller, ball bearing, terminal block
PM106-48D-4BT-7	48	100	200	7.2	2700	41	14.2		
POB23-12D-5B-2	12	23	650	7.8	2600	51	14.2	5.0 X 5.0 X 1.6 (127 X 127 X 41)	plastic housing and impeller, ball bearing, 24 AWG wire leads

ISOLATION TRANSFORMERS—50-60 HZ

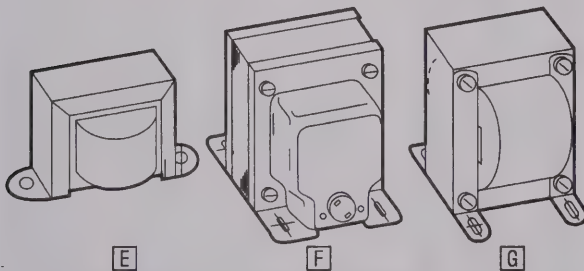


All units have static shield, 115V output.

Triad No.	Fig.	VA Output	Input Volts	Case Size, In. H × W × D	Price Each
N-48X	A	15	115	1 ¹ / ₈ × 3 ¹ / ₈ × 2	\$ 13.76
N-51X	A	35	115	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	14.21
N-68X	A	50	115/230†	2 ³ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	18.42
N-53MG#	B	85	115	3 ¹ / ₈ × 2 ³ / ₈ × 4 ¹ / ₈	56.28
N-77U	C	100	115/230	3 ¹ / ₈ × 2 ³ / ₈ × 3	29.15
N-54MG#	B	150	115	3 ¹ / ₈ × 3 ³ / ₈ × 5 ¹ / ₈	60.56
N-67A	D	150	115/230†	3 ¹ / ₈ × 3 ³ / ₈ × 3 ¹ / ₈	40.13
N-55MG#	B	250	115	4 ¹ / ₈ × 3 ¹ / ₈ × 5	71.67
N-255MG#	B	250	230	4 ¹ / ₈ × 3 ¹ / ₈ × 5	71.67
N-66A	D	250	115/230†	4 ¹ / ₈ × 3 ¹ / ₈ × 4 ¹ / ₈	59.04
N-57MG#	B	500	115	5 ¹ / ₈ × 4 ¹ / ₈ × 6 ¹ / ₈	108.67
N-257MG#	B	500	230	5 ¹ / ₈ × 4 ¹ / ₈ × 6 ¹ / ₈	108.67
N-59MG#	B	1000	115	5 ¹ / ₈ × 4 ¹ / ₈ × 8	207.22
N-259MG#	B	1000	230	5 ¹ / ₈ × 4 ¹ / ₈ × 8	207.22

#3-wire cord, plug and socket. †Split winding.

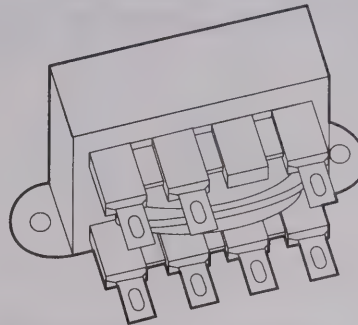
STEP-UP/STEP-DOWN AUTOFORMERS—50-60 HZ



Triad No.	Fig.	VA Output	Input Volts	Output Volts	Size, Inches H × W × D	Price Each
N-1X	E	50	230	115	2 ¹ / ₈ × 3 ¹ / ₈ × 2	\$ 11.01
N-3MG#	F	85	230	115	3 ¹ / ₈ × 2 ³ / ₈ × 3 ¹ / ₈	38.75
N-2X	E	100	230	115	2 ¹ / ₈ × 4 × 2 ¹ / ₈	16.18
N-150MG	F	150	115	230	3 ¹ / ₈ × 2 ³ / ₈ × 3 ¹ / ₈	52.22
F-302U	G	150	277	115	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	22.78
N-4MG#	F	150	230	115	3 ¹ / ₈ × 2 ³ / ₈ × 4 ¹ / ₈	52.22
N-6U	G	200	230	115	3 ¹ / ₈ × 2 ³ / ₈ × 2 ¹ / ₈	29.78
N-250MG#	F	250	115	230	3 ¹ / ₈ × 3 ¹ / ₈ × 3 ¹ / ₈	64.22
N-5MG#	F	250	230	115	3 ¹ / ₈ × 3 ¹ / ₈ × 4 ¹ / ₈	64.22
N-500MG#	F	500	115	230	4 ¹ / ₈ × 3 ¹ / ₈ × 4 ¹ / ₈	72.22
N-7MG#	F	600	230	115	4 ¹ / ₈ × 3 ¹ / ₈ × 5	72.22
N-1000MG#	F	1000	115	230	5 ¹ / ₈ × 4 ¹ / ₈ × 5 ¹ / ₈	119.67
N-9MG#	F	1250	230	115	5 ¹ / ₈ × 4 ¹ / ₈ × 6 ¹ / ₈	142.78
N-11MG#	F	2000	230	115	5 ¹ / ₈ × 4 ¹ / ₈ × 8 ¹ / ₈	201.78

#3-wire cord, plug and socket.

QUICK PACK POWER TRANSFORMERS



UL RECOGNIZED
Class B

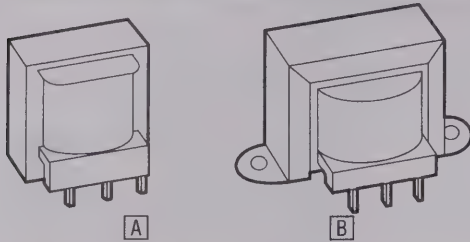
The Quick Pack Series is the latest addition to Triad's extensive line of small power transformers. Quick Pack transformers can offer a significant reduction in size and weight for a given VA rating. Plus, these transformers come with special quick-connect or solder terminals. Quick Pack transformers are available in six sizes for a wide variety of applications.

Split Bobbin Non-Concentric Winding—Eliminates costly electrostatic shielding, reduces transformer size and space. The Quick Pack transformer's unique construction makes possible higher HiPot testing, 2500 V rather than 1500 V. This series is available with a single 115 VAC or dual 115/230 VAC primary, rated 50/60 Hz. Class B insulation insures maximum total temperature of 130°C continuous.

Triad No.	VA Rating	Output Rating	Size, Inches H × W × D	Price Each
115V 50/60 Hz PRIMARY				
F3-10	2.4	10 VCT @ 0.25A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	\$ 7.68
F3-12	2.4	12.6 VCT @ 0.2A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	7.68
F3-16	2.4	16 VCT @ 0.15A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	7.68
F3-20	2.4	20 VCT @ 0.12A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	7.68
F3-24	2.4	24 VCT @ 0.1A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	7.68
F3-28	2.4	28 VCT @ 0.085 A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	7.68
F3-36	2.4	36 VCT @ 0.065 A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	7.68
F3-48	2.4	48 VCT @ 0.05 A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	7.68
F3-56	2.4	56 VCT @ 0.045 A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	7.68
F3-120	2.4	120 VCT @ 0.02 A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	7.68

115/230V 50/60 Hz PRIMARY				
FD4-10	6	10 VCT @ 0.6A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	\$10.25
FD4-12	6	12.6 VCT @ 0.5A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	10.25
FD4-16	6	16 VCT @ 0.4A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	10.25
FD4-20	6	20 VCT @ 0.3A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	10.25
FD4-24	6	24 VCT @ 0.25A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	10.25
FD4-28	6	28 VCT @ 0.2A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	10.25
FD4-36	6	36 VCT @ 0.17A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	10.25
FD4-48	6	48 VCT @ 0.125A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	10.25
FD4-56	6	56 VCT @ 0.11A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	10.25
FD4-120	6	120 VCT @ 0.05A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	10.25
FD5-10	12	10 VCT @ 1.2A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	11.35
FD5-12	12	12.6 VCT @ 1.0A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	11.35
FD5-16	12	16 VCT @ 0.8A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	11.35
FD5-20	12	20 VCT @ 0.6A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	11.35
FD5-24	12	24 VCT @ 0.5A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	11.35
FD5-28	12	28 VCT @ 0.42A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	11.35
FD5-36	12	36 VCT @ 0.35A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	11.35
FD5-48	12	48 VCT @ 0.25A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	11.35
FD5-56	12	56 VCT @ 0.22A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	11.35
FD5-120	12	120 VCT @ 0.1A	1 ¹ / ₈ × 1 ¹ / ₈ × 1 ¹ / ₈	11.35
FD6-10	30	10 VCT @ 3.0A	1 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	14.70
FD6-12	30	12.6 VCT @ 2.5A	1 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	14.70
FD6-16	30	16 VCT @ 2.0A	1 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	14.70
FD6-20	30	20 VCT @ 1.5A	1 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	14.70
FD6-24	30	24 VCT @ 1.25A	1 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	14.70
FD6-28	30	28 VCT @ 1.1A	1 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	14.70
FD6-36	30	36 VCT @ 0.85A	1 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	14.70
FD6-48	30	48 VCT @ 0.63A	1 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	14.70
FD6-56	30	56 VCT @ 0.54A	1 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	14.70
FD6-120	30	120 VCT @ 0.25A	1 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	14.70
FD7-10	56	10 VCT @ 5.0A	2 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	18.00
FD7-12	56	12.6 VCT @ 4.0A	2 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	18.00
FD7-16	56	16 VCT @ 3.5A	2 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	18.00
FD7-20	56	20 VCT @ 2.8A	2 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	18.00
FD7-24	56	24 VCT @ 2.4A	2 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	18.00
FD7-28	56	28 VCT @ 2.0A	2 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	18.00
FD7-36	56	36 VCT @ 1.5A	2 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	18.00
FD7-48	56	48 VCT @ 1.2A	2 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	18.00
FD7-56	56	56 VCT @ 1.0A	2 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	18.00
FD7-120	56	120 VCT @ 0.5A	2 ¹ / ₈ × 2 ¹ / ₈ × 1 ¹ / ₈	18.00
FD8-10	100	56 VCT @ 10.0A	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	25.00
FD8-12	100	12.6 VCT @ 8.0A	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	25.00
FD8-16	100	16 VCT @ 6.25A	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	25.00
FD8-20	100	20 VCT @ 5.0A	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	25.00
FD8-24	100	24 VCT @ 4.0A	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	25.00
FD8-28	100	28 VCT @ 3.6A	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	25.00
FD8-36	100	36 VCT @ 2.8A	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	25.00
FD8-48	100	48 VCT @ 2.0A	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	25.00
FD8-56	100	56 VCT @ 1.8A	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	25.00
FD8-120	100	120 VCT @ 0.85A	2 ¹ / ₈ × 3 ¹ / ₈ × 2 ¹ / ₈	25.00

LOW-VOLTAGE, LOW CURRENT, PLUG-IN PRINTED CIRCUIT POWER TRANSFORMERS



Triad No.	Fig.	Output Watts	Secondary		Price Each
			Series	Parallel Conn.	

PRIMARY 115 VOLTS—50-60 Hz.

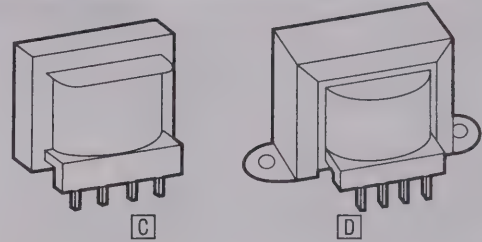
F-131P	A	1 1/2	8 V CT @ .188 A	4 V @ .376 A	\$12.20
F-139P	A	1 1/2	12.6 V CT @ .12 A	6.3 V @ .24 A	12.68
F-132P	A	1 1/2	15 V CT @ .10 A	7.5 V @ .20 A	12.27
F-150P	A	1 1/2	17 V CT @ .085 A	8.5 V @ .17 A	12.98
F-138P	A	1 1/2	25.2 V CT @ .06 A	12.6 V @ .12 A	12.68
F-133P	A	1 1/2	30 V CT @ .05 A	15 V @ .10 A	12.69
F-160P	A	1 1/2	34 V CT @ .045 A	17 V @ .09 A	14.33
F-137P	A	1 1/2	40 V CT @ .038 A	20 V @ .076 A	12.18
F-134P	A	1 1/2	54 V CT @ .028 A	27 V @ .056 A	13.57
F-135P	A	1 1/2	76 V CT @ .02 A	38 V @ .04 A	13.62
F-136P	A	1 1/2	116 V CT @ .013 A	58 V @ .026 A	15.13
F-141XP	B	4 1/2	8 V CT @ .562 A	4 V @ 1.124 A	10.78
F-149XP	B	4 1/2	12.6 V CT @ .35 A	6.3 V @ .70 A	10.78
F-142XP	B	4 1/2	15 V CT @ .30 A	7.5 V @ .60 A	10.06
F-161XP	B	4 1/2	17 V CT @ .264 A	8.5 V @ .528 A	10.78
F-148XP	B	4 1/2	25.2 V CT @ .178 A	12.6 V @ .356 A	10.78
F-143XP	B	4 1/2	30 V CT @ .15 A	15 V @ .30 A	10.02
F-162XP	B	4 1/2	34 V CT @ .132 A	17 V @ .264 A	10.78
F-147XP	B	4 1/2	40 V CT @ .112 A	20 V @ .224 A	10.78
F-144XP	B	4 1/2	54 V CT @ .084 A	27 V @ .168 A	10.78
F-145XP	B	4 1/2	76 V CT @ .060 A	38 V @ .120 A	10.62
F-146XP	B	4 1/2	116 V CT @ .033 A	58 V @ .066 A	10.78
F-151XP	B	7 1/2	8 V CT @ .940 A	4 V @ 1.880 A	13.37
F-159XP	B	7 1/2	12.6 V CT @ .60 A	6.3 V @ 1.2 A	13.37
F-152XP	B	7 1/2	15 V CT @ .50 A	7.5 V @ 1.00 A	13.37
F-163XP	B	7 1/2	17 V CT @ .441 A	8.5 V @ .882 A	13.48
F-158XP	B	7 1/2	25.2 V CT @ .30 A	12.6 V @ .60 A	13.37
F-153XP	B	7 1/2	30 V CT @ .25 A	15 V @ .50 A	13.37
F-146XP	B	7 1/2	34 V CT @ .22 A	17 V @ .44 A	13.48
F-157XP	B	7 1/2	40 V CT @ .188 A	20 V @ .376 A	13.37
F-154XP	B	7 1/2	54 V CT @ .14 A	27 V @ .28 A	13.37
F-155XP	B	7 1/2	76 V CT @ .100 A	38 V @ .200 A	13.37
F-156XP	B	7 1/2	116 V CT @ .065 A	58 V @ .130 A	13.37

PRIMARY 115/230 VOLTS—50-60 Hz.

F-3132P	B	1 1/2	5 V CT @ .1 A	7.5 V @ .2 A	\$ 9.13
F-333P	B	1 1/2	30 V CT @ .05 A	15 V @ .10 A	10.15
F-348XP	A	4 1/2	12.6 V CT @ .350 A	6.3 V @ .700 A	10.28
F-3142XP	A	4 1/2	15 V CT @ .3 A	7.5 V @ .6 A	9.35
F-349XP	A	4 1/2	16 V CT @ .28 A	8 V @ .56 A	10.35
F-350XP	A	4 1/2	24 V CT @ .180 A	12 V @ .360 A	11.88
F-358XP	A	4 1/2	20 V CT @ .225 A	10 V @ .450 A	12.34
F-3143XP	A	4 1/2	30 V CT @ .15 A	15 V @ .3 A	10.99
F-363XP	A	7 1/2	230 V CT @ .020 A	115 V @ .040 A	11.68
F-3152XP	A	7 1/2	15 V CT @ .5 A	7.5 V @ 1.0 A	11.75
F-3153XP	A	7 1/2	30 V CT @ .25 A	15 V @ .5 A	11.75
F-359XP	A	10	24 V CT @ .45 A	12 V @ .90 A	14.56
F-362XP	A	10	20 V CT @ .500 A	10 V @ 1.0 A	15.04
F-365XP	A	10	12.6 V CT @ .800 A	6.3 V @ 1.6 A	15.04
F-366XP	A	10	16 V CT @ .640 A	8 V @ 1.28 A	14.71
F-371P	B	24	12.6 V CT @ 2 A	6.3 V @ 4 A	16.11
F-372P	B	24	16 V CT @ 1.5 A	8 V @ 3 A	16.27
F-373P	B	24	20 V CT @ 1.2 A	10 V @ 2.4 A	16.20
F-374P	B	24	24 V CT @ 1 A	12 V @ 2 A	16.02
F-375P	B	24	28 V CT @ .8 A	14 V @ 1.6 A	16.04
F-376P	B	24	34 V CT @ .7 A	17 V @ 1.4 A	16.27
F-377P	B	24	40 V CT @ .6 A	20 V @ 1.2 A	16.27
F-378P	B	24	56 V CT @ .42 A	28 V @ .84 A	16.22
F-379P	B	24	120 V CT @ .2 A	60 V @ .4 A	16.38

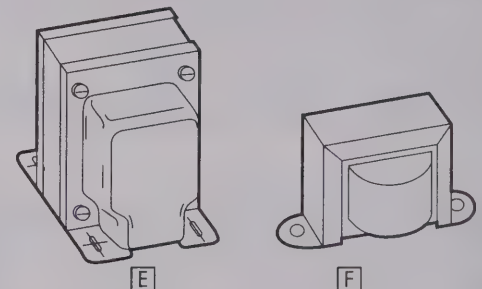
**OUR PRICES ARE COMPETITIVE
DUE TO OUR ASSOCIATION WITH
A NATIONAL BUYING GROUP.**

TRIPLE OUTPUT SECONDARIES FOR ± 15 VDC AND ± 5 VDC



Triad No.	Fig.	Net Watts	Sec. No. 1	Sec. No. 2	Price Each
F-165P	C	1 1/2	24 V CT @ .025 A	9 V @ .100 A	\$15.56
F-167P	C	1 1/2	32 V CT @ .020 A	15 V @ .060 A	16.34
F-168XP	D	4 1/2	32 V CT @ .050 A	15 V @ .195 A	11.24
F-166XP	D	7 1/2	24 V CT @ .125 A	9 V @ .500 A	13.87
F-169XP	D	7 1/2	32 V CT @ .100 A	15 V @ .287 A	13.44

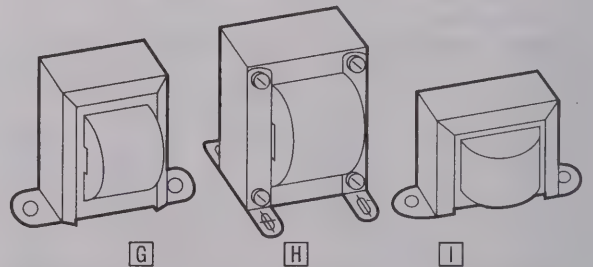
LOW VOLTAGE RECTIFIER TRANSFORMERS



All use 115 volt tapped primary. Used to supply transistor DC voltage. 15 halfwave or 30 in bridge circuit.

Triad No.	Fig.	Secondary		Test Volts	Price Each
		Volts	Amps		
F-94X	F	10-20 CT-40 CT	.035	1500	\$10.99
F-90X	F	10-20 CT-40 CT	.1	1500	11.84
F-91X	F	10-20 CT-40 CT	.3	1500	15.52
F-93X	F	10-20 CT-40 CT	.75	1500	17.21
F-92A	E	10-20 CT-40 CT	1.0	1500	24.40

POWER SUPPLY, CONTROL AND FILAMENT TRANSFORMERS



Triad No.	Fig.	Secondary		Test Volts	Price Each
		Volts	Amps		

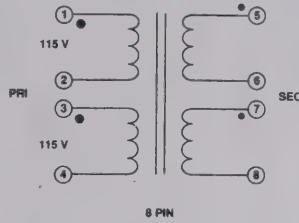
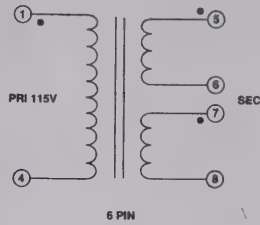
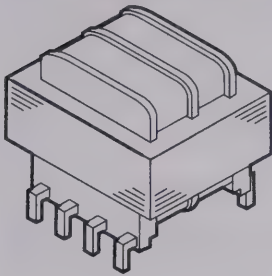
MULTIPLE SECONDARY PRIMARY 115 VOLTS—50-60 Hz.

F-237Z#	G	12 CT	1	1500	\$22.58
F-241U#	H	18 CT	1	1500	22.64
F-243U#	H	18 CT	1	1500	44.42
F-244U#	H	18 CT	4	1500	53.90
F-195X	I	18 CT	4	1500	17.55
F-196U	H	18 CT	8	1500	25.38
F-197U	H	18 CT	8	1500	25.29
F-198U	H	18 CT	8	1500	40.28

#60 Hz operation.

SPLIT-BOBBIN TRANSFORMERS

Split-bobbin transformers are nonconcentrically wound with primary and secondaries wound side by side, unlike the secondary-on-top-of-primary windings of standard PC board transformers. Split-bobbin winding and the resultant low capacitive coupling eliminate costly electrostatic shielding. The unique construction also makes possible higher voltage ratings—2500 V rather than 1500 V.



Triad No.	VA	Secondary Ratings, rms			Price Each
		Individual	Series	Parallel	

115 VAC, 6-PIN

F10-110	1.1	5V @ .11A	10V CT @ .11A	5V @ .22A	\$ 7.50
F10-250	2.5	5V @ .25A	10V CT @ .25A	5V @ .5A	7.65
F10-600	6.0	5V @ .6A	10V CT @ .6A	5V @ 1.2A	8.65
F10-1200	12.0	5V @ 1.2A	10V CT @ 1.2A	5V @ 2.4A	9.90
F10-2000	20.0	5V @ 2A	10V CT @ 2A	5V @ 4A	11.85
F10-3600	36.0	5V @ 3.6A	10V CT @ 3.6A	5V @ 7.2A	14.50
F12-090	1.1	6.3V @ .09A	12.6V CT @ .09A	6.3V @ .18A	7.50
F12-200	2.5	6.3V @ .2A	12.6V CT @ .2A	6.3V @ .4A	7.65
F12-500	6.0	6.3V @ .5A	12.6V CT @ .5A	6.3V @ 1.0A	8.65
F12-1000	12.0	6.3V @ 1.0A	12.6V CT @ 1.0A	6.3V @ 2.0A	9.90
F12-1600	20.0	6.3V @ 1.6A	12.6V CT @ 1.6A	6.3V @ 3.2A	11.85
F12-2850	36.0	6.3V @ 2.85A	12.6V CT @ 2.85A	6.3V @ 5.7A	14.50
F16-070	1.1	8V @ .07A	16V CT @ .07A	8V @ .14A	7.50
F16-150	2.5	8V @ .15A	16V CT @ .15A	8V @ .3A	7.65
F16-400	6.0	8V @ .4A	16V CT @ .4A	8V @ .8A	8.65
F16-800	12.0	8V @ .8A	16V CT @ .8A	8V @ 1.6A	9.90
F16-1250	20.0	8V @ 1.25A	16V CT @ 1.25A	8V @ 2.5A	11.85
F16-2250	36.0	8V @ 2.25A	16V CT @ 2.25A	8V @ 4.5A	14.50
F20-055	1.1	10V @ .055A	20V CT @ .055A	10V @ .11A	7.50
F20-120	2.5	10V @ .12A	20V CT @ .12A	10V @ .24A	7.65
F20-300	6.0	10V @ .3A	20V CT @ .3A	10V @ .6A	8.65
F20-600	12.0	10V @ .6A	20V CT @ .6A	10V @ 1.2A	9.90
F20-1000	20.0	10V @ 1.0A	20V CT @ 1.0A	10V @ 2.0A	11.85
F20-1800	36.0	10V @ 1.8A	20V CT @ 1.8A	10V @ 3.6A	14.50
F24-045	1.1	12V @ .045A	24V CT @ .045A	12V @ .09A	7.50
F24-100	2.5	12V @ .1A	24V CT @ .1A	12V @ .2A	7.65
F24-250	6.0	12V @ .25A	24V CT @ .25A	12V @ .5A	8.65
F24-500	12.0	12V @ .5A	24V CT @ .5A	12V @ 1.0A	9.90
F24-800	20.0	12V @ .8A	24V CT @ .8A	12V @ 1.6A	11.85
F24-1500	36.0	12V @ 1.5A	24V CT @ 1.5A	12V @ 3.0A	14.50
F28-040	1.1	14V @ .04A	28V CT @ .04A	14V @ .08A	7.50
F28-85	2.5	14V @ .085A	28V CT @ .085A	14V @ .17A	7.65
F28-200	6.0	14V @ .2A	28V CT @ .2A	14V @ .4A	8.65
F28-420	12.0	14V @ .42A	28V CT @ .42A	14V @ .84A	6.44
F28-700	20.0	14V @ .7A	28V CT @ .7A	14V @ 1.4A	11.85
F28-1300	36.0	14V @ 1.3A	28V CT @ 1.3A	14V @ 2.6A	14.50
F36-030	1.1	18V @ .03A	36V CT @ .03A	18V @ .06A	7.50
F36-65	2.5	18V @ .065A	36V CT @ .065A	18V @ .13A	7.65
F36-170	6.0	18V @ .17A	36V CT @ .17A	18V @ .34A	8.65
F36-350	12.0	18V @ .35A	36V CT @ .35A	18V @ .7A	9.90
F36-550	20.0	18V @ .55A	36V CT @ .55A	18V @ 1.1A	11.85
F36-1000	36.0	18V @ 1.0A	36V CT @ 1.0A	18V @ 2.0A	14.50
F48-023	1.1	24V @ .023A	48V CT @ .023A	24V @ .046A	7.50
F48-050	2.5	24V @ .05A	48V CT @ .05A	24V @ .1A	7.65
F48-125	6.0	24V @ .125A	48V CT @ .125A	24V @ .25A	8.65
F48-250	12.0	24V @ .25A	48V CT @ .25A	24V @ .5A	9.90
F48-400	20.0	24V @ .4A	48V CT @ .4A	24V @ .8A	11.85
F48-750	36.0	24V @ .75A	48V CT @ .75A	24V @ 1.5A	14.50
F56-020	1.1	28V @ .02A	56V CT @ .02A	28V @ .04A	7.50
F56-045	2.5	28V @ .045A	56V CT @ .045A	28V @ .09A	7.65
F56-110	6.0	28V @ .11A	56V CT @ .11A	28V @ .22A	8.65
F56-220	12.0	28V @ .22A	56V CT @ .22A	28V @ .44A	9.90
F56-350	20.0	28V @ .35A	56V CT @ .35A	28V @ .7A	11.85
F56-650	36.0	28V @ .65A	56V CT @ .65A	28V @ 1.3A	14.50
F120-010	1.1	60V @ .01A	120V CT @ .01A	60V @ .02A	7.50
F120-020	2.5	60V @ .02A	120V CT @ .02A	60V @ .04A	7.65
F120-050	6.0	60V @ .05A	120V CT @ .05A	60V @ .1A	8.65
F120-100	12.0	60V @ .1A	120V CT @ .1A	60V @ .2A	9.90
F120-160	20.0	60V @ .16A	120V CT @ .16A	60V @ .32A	11.85
F120-300	36.0	60V @ .3A	120V CT @ .3A	60V @ .6A	14.50

Triad No.	VA	Secondary Ratings, rms			Price Each
		Individual	Series	Parallel	

115/230 VAC, 8-PIN

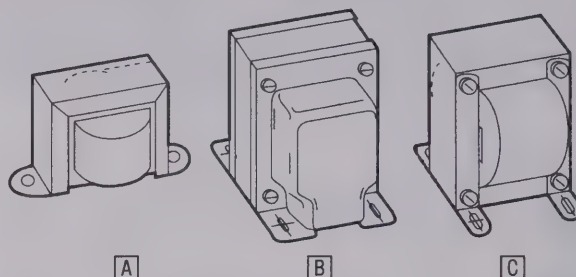
FS10-110	1.1	5V @ .11A	10V CT @ .11A	5V @ .22A	\$ 8.70
FS10-250	2.5	5V @ .25A	10V CT @ .25A	5V @ .5A	9.00
FS10-600	6.0	5V @ .6A	10V CT @ .6A	5V @ 1.2A	9.60
FS101200	12.0	5V @ 1.2A	10V CT @ 1.2A	5V @ 2.4A	11.00
FS102000	20.0	5V @ 2A	10V CT @ 2A	5V @ 4A	13.50
FS103600	36.0	5V @ 3.6A	10V CT @ 3.6A	5V @ 7.2A	16.00
FS12-090	1.1	6.3V @ .09A	12.6V CT @ .09A	6.3V @ .18A	8.70
FS12-200	2.5	6.3V @ .2A	12.6V CT @ .2A	6.3V @ .4A	9.00
FS12-500	6.0	6.3V @ .5A	12.6V CT @ .5A	6.3V @ 1.0A	9.60
FS121000	12.0	6.3V @ 1.0A	12.6V CT @ 1.0A	6.3V @ 2.0A	11.00
FS121600	20.0	6.3V @ 1.6A	12.6V CT @ 1.6A	6.3V @ 3.2A	13.50
FS122850	36.0	6.3V @ 2.85A	12.6V CT @ 2.85A	6.3V @ 5.7A	16.00
FS16-070	1.1	8V @ .07A	16V CT @ .07A	8V @ .14A	8.70
FS16-150	2.5	8V @ .15A	16V CT @ .15A	8V @ .3A	9.00
FS16-400	6.0	8V @ .4A	16V CT @ .4A	8V @ .8A	9.60
FS16-800	12.0	8V @ .8A	16V CT @ .8A	8V @ 1.6A	11.00
FS161250	20.0	8V @ 1.25A	16V CT @ 1.25A	8V @ 2.5A	13.50
FS162250	36.0	8V @ 2.25A	16V CT @ 2.25A	8V @ 4.5A	16.00
FS20-055	1.1	10V @ .055A	20V CT @ .055A	10V @ .11A	8.70
FS20-120	2.5	10V @ .12A	20V CT @ .12A	10V @ .24A	9.00
FS20-300	6.0	10V @ .3A	20V CT @ .3A	10V @ .6A	9.60
FS20-600	12.0	10V @ .6A	20V CT @ .6A	10V @ 1.2A	11.00
FS201000	20.0	10V @ 1.0A	20V CT @ 1.0A	10V @ 2A	13.50
FS201800	36.0	10V @ 1.8A	20V CT @ 1.8A	10V @ 3.6A	16.00
FS24-045	1.1	12V @ .045A	24V CT @ .045A	12V @ .09A	8.70
FS24-100	2.5	12V @ .1A	24V CT @ .1A	12V @ .2A	9.00
FS24-250	6.0	12V @ .25A	24V CT @ .25A	12V @ .5A	9.60
FS24-500	12.0	12V @ .5A	24V CT @ .5A	12V @ 1A	11.00
FS24-800	20.0	12V @ .8A	24V CT @ .8A	12V @ 1.6A	13.50
FS241500	36.0	12V @ 1.5A	24V CT @ 1.5A	12V @ 3A	16.00
FS28-040	1.1	14V @ .04A	28V CT @ .04A	14V @ .08A	8.70
FS28-85	2.5	14V @ .085A	28V CT @ .085A	14V @ .17A	9.00
FS28-200	6.0	14V @ .2A	28V CT @ .2A	14V @ .4A	9.60
FS28-420	12.0	14V @ .42A	28V CT @ .42A	14V @ .84A	11.00
FS28-700	20.0	14V @ .7A	28V CT @ .7A	14V @ 1.4A	13.50
FS281300	36.0	14V @ 1.3A	28V CT @ 1.3A	14V @ 2.6A	16.00
FS36-030	1.1	18V @ .03A	36V CT @ .03A	18V @ .06A	8.70
FS36-65	2.5	18V @ .065A	36V CT @ .065A	18V @ .13A	9.00
FS36-170	6.0	18V @ .17A	36V CT @ .17A	18V @ .34A	9.60
FS36-350	12.0	18V @ .35A	36V CT @ .35A	18V @ .7A	11.00
FS36-550	20.0	18V @ .55A	36V CT @ .55A	18V @ 1.1A	13.50
FS361000	36.0	18V @ 1A	36V CT @ 1A	18V @ 2A	16.00
FS48-023	1.1	24V @ .023A	48V CT @ .023A	24V @ .046A	8.70
FS48-050	2.5	24V @ .05A	48V CT @ .05A	24V @ .1A	9.00
FS48-125	6.0	24V @ .125A	48V CT @ .125A	24V @ .25A	9.60
FS48-250	12.0	24V @ .25A	48V CT @ .25A	24V @ .5A	11.00
FS48-400	20.0	24V @ .4A	48V CT @ .4A	24V @ .8A	13.50
FS48-750	36.0	24V @ .75A	48V CT @ .75A	24V @ 1.5A	16.00
FS56-020	1.1	28V @ .02A	56V CT @ .02A	28V @ .04A	8.70
FS56-045	2.5	28V @ .045A	56V CT @ .045A	28V @ .09A	9.00
FS56-110	6.0	28V @ .11A	56V CT @ .11A	28V @ .22A	9.60
FS56-220	12.0	28V @ .22A	56V CT @ .22A	28V @ .44A	11.00
FS56-350	20.0	28V @ .35A	56V CT @ .35A	28V @ .7A	13.50
FS56-650	36.0	28V @ .65A	56V CT @ .65A	28V @ 1.3A	16.00
FS120-01	1.1	60V @ .01A	120V CT @ .01A	60V @ .02A	8.70
FS120-02	2.5	60V @ .02A	120V CT @ .02A	60V @ .04A	9.00
FS120-05	6.0	60V @ .05A	120V CT @ .05A	60V @ .1A	9.60

CAN'T FIND THE EXACT PART YOU NEED?
CALL US FOR ASSISTANCE.

Triad No.	Fig.	Secondary		Test Volts	Case Size (In.) H x W x D	Wt. Lbs.	Price Each
		Volts	Amps				

SINGLE SECONDARY
PRIMARY 115 VOLTS — 50-60 Hz.

F-6X#	A	2.5 CT	6	2500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 1 ³ / ₄	1	\$11.24
F-3X#	A	2.5 CT	10	3000	2 ⁹ / ₃₂ × 3 ³ / ₁₆ × 2 ¹ / ₄	1.7	14.63
F-7X	A	5 CT	3	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 2	1.3	12.57
F-8X	A	5 CT	6	1500	2 ⁹ / ₃₂ × 3 ³ / ₁₆ × 2 ¹ / ₄	1.7	14.83
F-12X	A	5 CT	8	2500	2 ¹⁹ / ₃₂ × 4 × 2 ¹ / ₄	2.5	18.03
F-43X#	A	6.3	4	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 2	1.25	11.52
F-69X	A	6.3 CT	8	1500	2 ⁹ / ₁₆ × 4 × 2 ¹ / ₄	2.3	19.15
F-21A	B	6.3 CT	10	1500	3 ¹⁹ / ₃₂ × 2 ³ / ₃₂ × 3 ³ / ₁₆	3.8	33.57
F-22A	B	6.3 CT	20	2000	3 ⁷ / ₁₆ × 3 ⁹ / ₃₂ × 4 ¹ / ₁₆	7	38.75
F-28U*	C	7.5	25	3000	4 ¹ / ₁₆ × 3 ¹ / ₁₆ × 3 ³ / ₁₆	7.5	53.17
F-180X	A	10 CT	1	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 1 ³ / ₄	.9	13.43
F-31X	A	10 CT	3	2000	2 ⁹ / ₃₂ × 3 ³ / ₁₆ × 2 ¹ / ₄	1.7	13.69
F-96U	C	10 CT	6	1500	3 × 2 ¹ / ₂ × 2 ¹ / ₄	2.1	20.77
F-97U	C	10 CT	8	1500	3 ⁷ / ₁₆ × 2 ¹⁹ / ₁₆ × 3	4.0	29.41
F-113X	A	12	.15	1500	1 ³ / ₁₆ × 2 ³ / ₁₆ × 1 ³ / ₁₆	.4	7.93
F-216X#	A	12	.35	1500	1 ³ / ₁₆ × 2 ³ / ₁₆ × 1 ³ / ₁₆	.37	8.52
F-114X	A	12	.7	1500	1 ⁵ / ₁₆ × 2 ¹⁹ / ₁₆ × 1 ³ / ₁₆	.8	8.80
F-217X#	A	12	1.2	1500	2 × 3 ³ / ₁₆ × 1 ³ / ₁₆	1.0	11.26
F-218X#	A	12	2	1500	2 × 3 ³ / ₁₆ × 1 ³ / ₁₆	1.13	12.15
F-219X#	A	12	4	1500	2 ⁹ / ₁₆ × 4 × 2 ¹ / ₄	2.3	16.80
F-220U#	C	12	6	1500	3 ⁷ / ₁₆ × 1 ³ / ₁₆ × 2 ¹ / ₂	3.5	23.40
F-221U#	C	12	8	1500	3 ¹⁹ / ₁₆ × 3 ³ / ₁₆ × 2 ³ / ₁₆	4.0	22.21
F-29U	C	12 CT 11 CT 10 CT	11	3000	4 ³ / ₁₆ × 3 ¹ / ₁₆ × 3 ³ / ₁₆	6.5	39.97
F-70X	A	12.6 CT	1	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 1 ³ / ₄	1.3	10.54
F-224X#	A	12.6	3	1500	2 ¹ / ₄ × 3 ³ / ₁₆ × 2 ¹ / ₄	1.6	15.26
F-182U	C	12.6 CT	6	1500	3 ³ / ₁₆ × 2 ¹⁹ / ₁₆ × 2 ¹ / ₄	3.8	24.18
F-183U	C	12.6 CT	8	1500	3 ¹⁹ / ₁₆ × 3 ³ / ₁₆ × 2 ¹⁹ / ₁₆	5	30.78
F-250X	A	14 CT	1	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 1 ³ / ₄	1.2	12.23
F-251X	A	14 CT	2	1500	2 ¹ / ₄ × 3 ¹⁹ / ₁₆ × 1 ¹⁹ / ₁₆	1.5	13.41
F-252U	C	14 CT	4	1500	3 × 2 ¹ / ₂ × 2 ¹ / ₄	3	20.65
F-253U	C	14 CT	6	1500	3 ³ / ₁₆ × 2 ¹⁹ / ₁₆ × 2 ¹ / ₄	4	24.31
F-254X	A	20 CT	1	1500	2 ¹ / ₄ × 3 ¹⁹ / ₁₆ × 1 ¹⁹ / ₁₆	1.5	13.57
F-255X	A	20 CT	2	1500	2 ⁹ / ₁₆ × 4 × 2 ¹ / ₄	2.5	16.82
F-256U	C	20 CT	4	1500	2 ³ / ₁₆ × 2 ¹⁹ / ₁₆ × 2 ¹ / ₄	4	22.73
F-257U	C	20 CT	6	1500	3 ³ / ₁₆ × 3 ³ / ₁₆ × 3 ³ / ₁₆	5.7	30.98
F-258U	C	20 CT	8	1500	3 ³ / ₁₆ × 3 ³ / ₁₆ × 3 ¹ / ₂	6.4	36.56
F-259U	C	20 CT	10	1500	4 ¹ / ₁₆ × 3 ⁷ / ₁₆ × 3 ¹ / ₂	7.4	41.66
F-192X	A	24 CT	2	1500	2 ⁹ / ₁₆ × 4 × 2 ¹ / ₄	2.3	16.32
F-193U	C	24 CT	4	1500	3 ¹⁹ / ₁₆ × 3 ³ / ₁₆ × 2 ¹⁹ / ₁₆	4	27.51
F-260U	C	24 CT	6	1500	3 ³ / ₁₆ × 3 ³ / ₁₆ × 3 ¹ / ₂	6.4	36.47
F-261U	C	24 CT	8	1500	4 ¹ / ₁₆ × 3 ⁷ / ₁₆ × 3 ¹ / ₂	7.4	41.91
F-401U	C	24 CT	10	1500	4 ¹ / ₁₆ × 3 ⁷ / ₁₆ × 3 ³ / ₁₆	8.0	38.80
F-226U	C	24 CT	12	1500	4 ⁹ / ₁₆ × 3 ³ / ₁₆ × 4 ¹ / ₁₆	10.4	51.34
F-56X	A	25.2 CT	2.8	1500	2 ¹⁹ / ₃₂ × 2 × 2 ¹ / ₂	2.5	17.85
F-119X	A	26.8 CT	.15	1500	1 ³ / ₁₆ × 2 ³ / ₁₆ × 1 ¹ / ₂	.45	12.02
F-122X	A	28 CT	0.175	1500	1 ³ / ₁₆ × 2 ³ / ₁₆ × 1 ¹ / ₂	.35	11.36



Triad No.	Fig.	Secondary		Test Volts	Case Size (In.) H x W x D	Wt. Lbs.	Price Each
		Volts	Amps				

PRIMARY 115 VOLTS — 50-60 Hz (CONT'D)

F-124X	A	28 CT	0.800	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 2	1.0	\$12.18
F-184X	A	28 CT	1	1500	2 ⁵ / ₁₆ × 3 ¹⁹ / ₁₆ × 2 ¹ / ₄	1.4	13.80
F-187U	C	28 CT	4	1500	3 ¹ / ₂ × 2 ⁷ / ₁₆ × 3 ¹ / ₁₆	5.3	26.99
F-188X	A	35 CT	.1	1500	1 ⁵ / ₁₆ × 2 ¹⁹ / ₁₆ × 1 ⁷ / ₁₆	.35	12.10
F-228X#	A	35 CT	.3	1500	1 ⁵ / ₁₆ × 2 ¹⁹ / ₁₆ × 1 ⁵ / ₁₆	.6	10.51
F-189X	A	35 CT	.5	1500	2 ⁵ / ₁₆ × 3 ¹⁹ / ₁₆ × 1 ¹⁹ / ₁₆	1	12.61
F-191U	C	35 CT	4	1500	3 ¹⁹ / ₁₆ × 3 ³ / ₁₆ × 3 ³ / ₁₆	6	29.68
F-268U	C	35 CT	8	1500	4 ¹ / ₁₆ × 3 ³ / ₁₆ × 4 ¹ / ₁₆	11	49.97
F-270X	A	40 CT	1	1500	2 ⁹ / ₁₆ × 4 × 2 ¹ / ₄	2.6	14.69
F-271U	C	40 CT	2	1500	3 ³ / ₁₆ × 2 ¹⁹ / ₁₆ × 2 ⁷ / ₁₆	4	21.46
F-272U	C	40 CT	4	1500	3 ³ / ₁₆ × 3 ³ / ₁₆ × 3 ¹ / ₂	6.4	31.33
F-273U	C	40 CT	6	1500	4 ¹ / ₂ × 3 ³ / ₁₆ × 4	10	50.71
F-275U	C	40 CT	10	1500	5 ¹ / ₁₆ × 4 ⁹ / ₁₆ × 4 ¹ / ₂	14.5	66.27
F-59X	A	60 CT	.4	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 2	1.3	11.91
F-279U	C	60 CT	1	1500	3 × 2 ¹ / ₂ × 2 ³ / ₁₆	3.4	22.23
F-280U	C	60 CT	2	1500	3 ³ / ₁₆ × 3 ³ / ₁₆ × 3 ¹ / ₂	5.6	31.33
F-282U	C	60 CT	6	1500	5 ¹ / ₁₆ × 4 ⁹ / ₁₆ × 3 ¹ / ₂	12.5	53.92

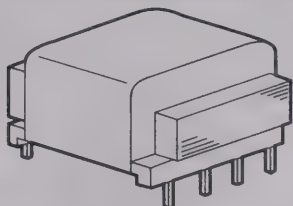
PRIMARY 115 230 VOLTS — 50-60 Hz

F-301X	A	2.5 CT	3	1500	1 ⁵ / ₁₆ × 2 ¹⁹ / ₁₆ × 1 ⁵ / ₁₆	.68	\$12.84
F-313X	A	6.3	.6	1500	1 ³ / ₁₆ × 2 ³ / ₁₆ × 1 ³ / ₁₆	.37	12.54
F-314X	A	6.3 CT	1.2	2500	1 ⁵ / ₁₆ × 2 ¹⁹ / ₁₆ × 1 ⁵ / ₁₆	.7	12.95
F-316X	A	6.3 CT	3	2500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 2	1.3	16.66
F-318X	A	6.3 CT	6	1500	2 ¹⁹ / ₃₂ × 4 × 2 ¹ / ₄	2.3	24.50
F-325X	A	12.6 CT	1.5	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 2	1.3	13.21
F-344X	A	12.6 CT	2	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 2	1.25	13.92
F-326X	A	12.6 CT	2.5	1500	2 ⁹ / ₃₂ × 3 ¹⁹ / ₁₆ × 2	1.55	16.13
F-3181U	C	12.6 CT	4	1500	3 ¹⁹ / ₁₆ × 2 ¹⁹ / ₁₆ × 2 ¹⁹ / ₁₆	2.3	22.23
F-3112X	A	14 CT	.25	1500	1 ³ / ₁₆ × 2 ³ / ₁₆ × 1 ¹ / ₂	.3	12.84
F-3116X	A	24 CT	.2	1500	1 ³ / ₁₆ × 2 ³ / ₁₆ × 1 ¹ / ₂	.45	11.52
F-3117X	A	24 CT	.4	1500	1 ⁵ / ₁₆ × 2 ¹⁹ / ₁₆ × 1 ¹ / ₂	.75	13.53
F-3118X	A	24 CT	.7	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 2	1.3	14.07
F-345X	A	24 CT	1	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 2	1.3	12.71
F-341X	A	25.2 CT	2	1500	2 ¹⁹ / ₃₂ × 4 × 2 ¹ / ₄	2.2	17.96
F-340X	A	26.8 CT	1	1500	1 ¹⁵ / ₁₆ × 3 ³ / ₁₆ × 2	1.3	16.66
F-355X	A	26.8 CT	1.7	1500	2 ¹⁹ / ₃₂ × 4 × 2 ¹ / ₄	2.3	18.39
F-3185U	C	28 CT	2	1500	3 ¹⁹ / ₁₆ × 2 ¹ / ₂ × 2 ¹ / ₁₆	2.9	23.20
F-354X	A	35 CT	1.5	1500	2 ¹⁹ / ₃₂ × 4 × 2 ¹ / ₄	2.2	17.96

#60 Hz operation. *Tapped primary to produce lower voltages.

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.

FLAT-PACK POWER TRANSFORMERS

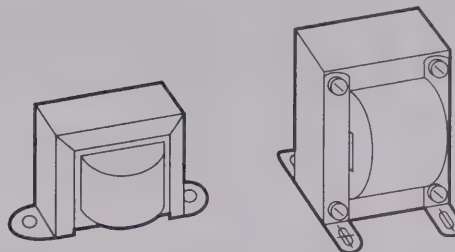


Designed to meet the needs of low-clearance printed circuit boards and solid state designs. Allows 1" board spacing for 6 VA units or 1/4" spacing for 12 VA units.

115/230 VAC, 50-60 HZ

Triad No.	VA	Secondary Ratings, rms			Price Each
		Individual	Series	Parallel	
FP10-250	2.5	5V@.25A	10V CT@.25A	5V@.5A	\$10.75
FP10-600	6.0	5V@.6A	10V CT@.6A	5V@1.2A	12.00
FP10-1200	12.0	5V@1.2A	10V CT@1.2A	5V@2.4A	14.00
FP12-200	2.5	6.3V@.2A	12.6V CT@.2A	6.3V@.4A	10.75
FP12-475	6.0	6.3V@.475A	12.6V CT@.475A	6.3V@.95A	12.00
FP12-950	12.0	6.3V@.95A	12.6V CT@.95A	6.3V@1.9A	14.00
FP16-150	2.5	8V@.15A	16V CT@.15A	8V@.3A	10.75
FP16-375	6.0	8V@.375A	16V CT@.375A	8V@.75A	12.00
FP16-750	12.0	8V@.75A	16V CT@.75A	8V@1.5A	14.00
FP20-125	2.5	10V@.125A	20V CT@.125A	10V@.25A	10.75
FP20-300	6.0	10V@.3A	20V CT@.3A	10V@.6A	12.00
FP20-600	12.0	10V@.6A	20V CT@.6A	10V@1.2A	14.00
FP24-100	2.5	12V@.1A	24V CT@.1A	12V@.2A	10.75
FP24-250	6.0	12V@.25A	24V CT@.25A	12V@.5A	12.00
FP24-500	12.0	12V@.5A	24V CT@.5A	12V@1.0A	14.00
FP30-85	2.5	15V@.08A	30V CT@.08A	15V@.16A	10.75
FP30-200	6.0	15V@.2A	30V CT@.2A	15A@.4A	12.00
FP30-400	12.0	15V@.4A	30V CT@.4A	15A@.8A	14.00
FP34-75	2.5	17V@.075A	34V CT@.075A	17V@.15A	10.75
FP34-170	6.0	17V@.17A	34V CT@.17A	17V@.34A	12.00
FP34-340	12.0	17V@.34A	34V CT@.34A	17V@.68A	14.00
FP40-60	2.5	20V@.06A	40V CT@.06A	20V@.12A	10.75
FP40-150	6.0	20V@.15A	40V CT@.15A	20V@.3A	12.00
FP40-300	12.0	20V@.3A	40V CT@.3A	20V@.6A	14.00
FP56-45	2.5	28V@.045A	56V CT@.045A	28V@.09A	10.75
FP56-100	6.0	28V@.1A	56V CT@.1A	28V@.2A	12.00
FP56-200	12.0	28V@.2A	56V CT@.2A	28V@.4A	14.00
FP88-28	2.5	44V@.028A	88V CT@.028A	44V@.056A	10.75
FP88-65	6.0	44V@.065A	88V CT@.065A	44V@.13A	12.00
FP88-130	12.0	44V@.13A	88V CT@.13A	44V@.26A	14.00
FP120-20	2.5	60V@.02A	120V CT@.02A	60V@.04A	10.75
FP120-50	6.0	60V@.05A	120V CT@.05A	60V@.1A	12.00
FP120-100	12.0	60V@.1A	120V CT@.1A	60V@.2A	14.00
FP230-10	2.5	115V@.01A	230V CT@.01A	115V@.02A	10.75
FP230-25	6.0	115V@.025A	230V CT@.025A	115V@.05A	12.00
FP230-50	12.0	115V@.05A	230V CT@.05A	115V@.1A	14.00

SMOOTHING FILTER REACTORS

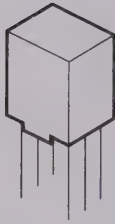


Triad No.		Induct., Henries	Current mADC	Resist., Ohms	Size, Inches H x W x D	Price Each
C-1X	A	15	20	1000	1 3/16 x 2 1/16 x 1 1/4	\$ 8.91
C-3X	A	10	50	500	1 5/8 x 2 13/16 x 1 1/2	8.55
C-8X	A	7	75	240	1 15/16 x 3 3/16 x 1 3/4	10.74
C-7X	A	10	90	270	1 15/16 x 3 3/16 x 2	11.17
C-14X	A	6	200	150	2 19/32 x 4 x 2 1/4	16.52
C-24X	A	1	240	50	1 5/8 x 2 13/16 x 1 1/2	8.34
C-36X	A	.5	300	30	1 3/8 x 2 3/8 x 1 1/2	8.80
C-17X	A	1.5	300	40	2 5/16 x 3 1/16 x 2	14.31
C-40X	A	.32	600	10	1 15/16 x 3 3/16 x 2	10.21
C-47U	B	.3 .075†	1A/2A	3/0.75	3 1/2 x 2 1/4 x 3 3/16	26.42
C-56U	B	.035	2A	.75	2 1/4 x 2 3/8 x 2	17.14
C-49U	B	.032 .008†	5A/10A	19/.05	4 1/4 x 3 1/2 x 3 3/8	56.96
C-59U	B	.01	12.5A	.10	3 1/2 x 4 1/4 x 3	37.34
C-80U	B	.024 .006†	20A/40A	.1/.025	5 1/16 x 4 1/16 x 5 1/2	134.65
C-60U	B	.005	22.5A	.06	3 3/4 x 4 1/2 x 4 3/16	55.66

*Inductive tolerance. - 20% + 50%. †Split winding.

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RED SPEC TRANSISTOR TRANSFORMERS



Transformers designed and constructed to conform to the rigid requirements of MIL-T-27D. Solid epoxy molded case, permanent and legible circuit data on every unit, base mounting pad for easy inspection of all soldering joints, high strength gold-plated nickel alloy leads, base dimensions of only 0.31" x 0.41". Total height of only 0.465", weight of 1.10 ounce.

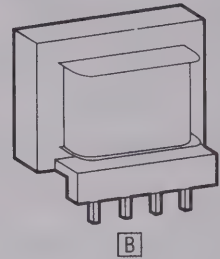
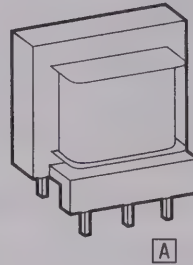
Triad No.	Impedance, Ohms		Power Level mW	Price Each
	Primary	Secondary		
LOW LEVEL INPUT TRANSFORMERS				
SP-4	200,000 CT	1000 CT	10	\$21.29
SP-5	50,000 CT	1000 CT	25	21.14
LOW LEVEL INTERSTAGE TRANSFORMERS				
SP-13	25,000 CT 20,000 CT	1000 CT 800 CT	40	\$20.11
LOW LEVEL DRIVER TRANSFORMERS				
SP-20	10,000 CT	1200 CT	50	\$20.84
SP-21	10,000 CT	2000 CT	50	21.21
SP-22	10,000	2000 CT 500	50	21.69
SP-29	10,000 CT	500 CT	50	20.01
OUTPUT TRANSFORMERS				
SP-33	1000	50	50	\$17.25
SP-42	150 CT	12	50	15.51
SP-49	300	600	50	21.98
SP-50	500 CT	600	50	16.31
SP-51	900 CT	600	50	19.12
SP-52	1500 CT	600	50	21.29
OUTPUT-ISOLATION TRANSFORMERS				
SP-66	10,000 CT	10,000 CT	50	\$16.93
SP-67	600 CT	600 CT	50	18.64
SP-68	10,000	10,000 CT 2500*	50	22.33
SP-69	600	600 CT 150	50	18.56
SP-70	600	600	50	17.48
*Split winding				
AUDIO CHOKES				
Triad No.	Inductive, Hys.	Current mA	Resistance Ohms	Price Each
SP-128	0.1	5	15	\$11.81

*Split winding

AUDIO CHOKES

Triad No.	Inductive, Hys.	Current mA	Resistance Ohms	Price Each
SP-128	0.1	5	15	\$11.81

PLUG-IN PC AUDIO TRANSFORMERS

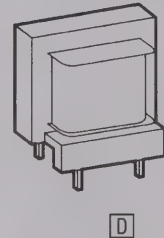
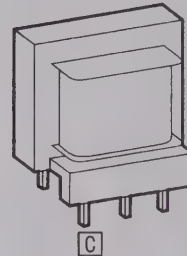


Output 100 mW. Size 5/8" x 1 1/2" except TY-146P, 1 watt output, size 1 1/2" x 1 3/4" x 1 1/2".

Triad No.	Fig.	Impedance, Ohms		Pri. DC Unbal., mA	Price Each
		Primary	Secondary		
TY-141P	A	10000 CT	10000 CT	4	\$12.98
TY-142P	A	10000 CT	2000 CT	4	8.73
TY-144P	A	15000 CT	15000 CT	4	9.58
TY-145P	A	600 CT	600 CT	15	9.67
TY-146P	B	600 CT/150†	600 CT/150†	.....	14.12

†Split wiring

TELEPHONE COUPLING TRANSFORMERS



Transformers specifically designed and manufactured to telephone company requirements for voice/data use over leased private line or through the dial-up switched telephone network. Used for impedance matching, isolation, line balance, bridging, hybrid and holding-coil applications. All units in plug-in printed circuit construction. **Frequency Response:** 300-3500 Hz. ± 0.5 dB. **Longitudinal Balance:** 45 dB min. **Return Loss:** 26 dB min. **Distortion:** 0.5% max. **Impedance Matching:** $\pm 10\%$. **Power Level:** -45 dBm to +7 dBm.

Triad No.	Fig.	Application	Impedance, Ohms		Price Each
			Primary	Secondary	
TY-300P	C	Hybrid†	600	600/800†	\$11.27
TY-301P	D	Coupling	600	900	10.71
TY-302P	C	Hybrid†	600	600/800	10.08
TY-303P	D	Bridging	4000	600	8.93
TY-304P	C	Coupling	600CT	600CT	8.45

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Staco variable transformers provide extreme versatility and reliability unlike any solid state controls. Staco controls may be used for industrial and laboratory applications to control voltage, current, power, heat, speed, light and electromechanical force. The output voltage from AC power sources may be adjusted continuously without waveform distortions or SCR generated noise. Features gold-plated commutators, precise regulation, high efficiency, conservative ratings and rugged construction. Options include panel mounts, cord and plug types, gauged and/or motor driven types, metered types, portable power supplies with or without meters, and ratings from 0.8 amps to 540 amps, and 40 volts to 560 volts for single or three-phase operations.



FIG. A

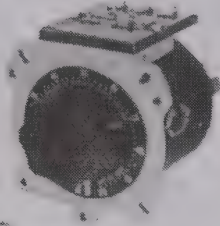


FIG. B

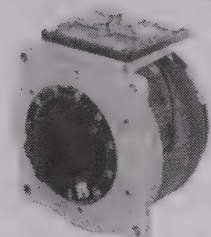


FIG. C

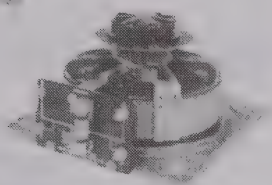


FIG. D

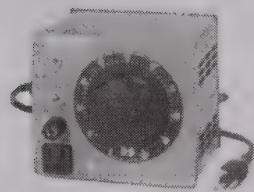


FIG. E

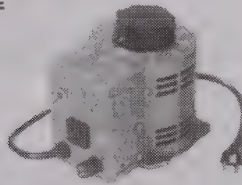


FIG. F

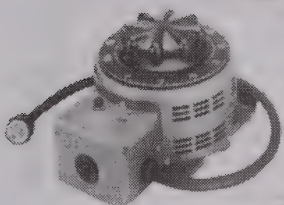


FIG. G



FIG. J

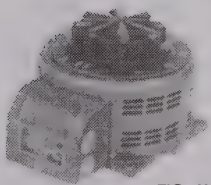


FIG. K

PANEL OR BENCH MOUNTING MODELS (120 VOLT INPUT SINGLE PHASE)

Staco Part No.	Fig.	Output Volts	Output Amps	KVA	Size (in.) H x D x W	Sh. Wt. Lbs.	Price Each
171	A	0-120/132	1.75	0.23	2 ¹ / ₁₆ x 1 ¹ / ₁₆	3.0	\$ 45.00
201	A	0-120/132	2.0	0.26	2 ¹ / ₁₆ x 1 ¹ / ₁₆	3.0	46.00
221-B	A	0-120/132	2.50	0.33	2 ¹ / ₁₆ x 2 ¹ / ₁₆	3.5	47.00
291	A	0-120/132	3.0	0.40	2 ¹ / ₁₆ x 2 ¹ / ₁₆	3.5	53.00
501	B	0-120/140	5.0	0.70	3 ³ / ₁₆ x 3 ³ / ₁₆ x 3 ³ / ₁₆	6.0	84.00
1010	B	0-120/140	10.0	1.4	5 ⁵ / ₁₆ x 5 x 4 ¹ / ₁₆	10.0	104.00
1010CT	J	0-120/140	10.0	1.4	6 ⁷ / ₁₆ x 5 x 4 ¹ / ₁₆	12.0	164.00
SQ1010	B	0-120/140	10.0	1.4	5 ⁵ / ₁₆ x 4 ¹ / ₁₆ x 4 ⁵ / ₁₆	12.0	111.00
1210	B	0-120	12.0	1.44	5 ⁵ / ₁₆ x 5 x 4 ³ / ₁₆	12.0	118.00
SQ1210	B	0-120	12.0	1.44	5 ⁵ / ₁₆ x 4 ¹ / ₁₆ x 4 ⁵ / ₁₆	12.0	131.00
1510	C	0-120/140	15.0	2.1	6 ¹ / ₁₆ x 6 ¹ / ₁₆ x 4 ³ / ₁₆	20.0	201.00
2510	C	0-120/140	25.0	3.5	8 ⁹ / ₁₆ x 7 ⁷ / ₁₆ x 4 ³ / ₁₆	23.0	291.00
2510CT	K	0-120/140	25.0	3.5	9 ⁷ / ₁₆ x 7 ⁷ / ₁₆ x 4 ³ / ₁₆	25.0	364.00
5011	D	0-140	50.0	7.0	15 ¹ / ₁₆ x 13 ⁷ / ₁₆ x 5 ¹ / ₁₆	66.6	663.00
5011CT	D	0-140	50.0	7.0	17 ¹ / ₁₆ x 14 x 7 ¹ / ₁₆	79.0	762.00
6010	D	0-120/140	60.0	8.4	15 ¹ / ₁₆ x 13 ⁷ / ₁₆ x 5 ¹ / ₁₆	66.0	830.00
6010CT	D	0-120/140	60.0	8.4	17 ¹ / ₁₆ x 14 x 7 ¹ / ₁₆	79.0	953.00

Note: Motorized models available also.

PANEL OR BENCH MOUNTING MODELS (240 VOLT INPUT SINGLE PHASE)

Staco Part No.	Fig.	Output Volts	Output Amps	KVA	Size (in.) H x D x W	Sh. Wt. Lbs.	Price Each
252	A	0-240/264	0.8	0.21	2 ¹ / ₁₆ x 2 ¹ / ₁₆	3.5	\$ 70.00
1020	B	0-240/280	3.5	0.98	5 ⁵ / ₁₆ x 5 x 4 ³ / ₁₆	12.0	141.00
1020CT	J	0-240/280	3.5	0.98	6 ⁷ / ₁₆ x 5 x 4 ³ / ₁₆	12.0	177.00
SQ1020	B	0-240/280	3.5	0.98	5 ⁵ / ₁₆ x 4 ¹ / ₁₆ x 4 ⁵ / ₁₆	12.0	141.00
1220	B	0-240	5.0	1.2	5 ⁵ / ₁₆ x 5 x 4 ³ / ₁₆	12.0	146.00
1220CT	J	0-240	5.0	1.2	6 ⁷ / ₁₆ x 5 x 4 ³ / ₁₆	12.0	184.00
SQ1220	B	0-240	5.0	1.2	5 ⁵ / ₁₆ x 4 ¹ / ₁₆ x 4 ⁵ / ₁₆	12.0	146.00
1520	C	0-240/280	9.5	2.66	6 ¹ / ₁₆ x 6 ¹ / ₁₆ x 4 ³ / ₁₆	20.0	201.00
1520CT	K	0-240/280	9.5	2.66	6 ¹ / ₁₆ x 9 ¹ / ₁₆ x 5	23.0	255.00
2520	C	0-240/280	10.0	2.8	8 ⁹ / ₁₆ x 7 ⁷ / ₁₆ x 4 ³ / ₁₆	23.0	291.00
2520CT	K	0-240/280	10.0	2.8	9 ⁷ / ₁₆ x 7 ⁷ / ₁₆ x 4 ³ / ₁₆	25.0	364.00
5021	D	0-240/280	28.0	7.8	15 ¹ / ₁₆ x 13 ⁷ / ₁₆ x 5 ¹ / ₁₆	64.0	663.00
5021CT	D	0-240/280	28.0	7.8	17 ¹ / ₁₆ x 14 x 7 ¹ / ₁₆	78.0	762.00
6020	D	0-240/280	35.0	9.8	15 ¹ / ₁₆ x 13 ⁷ / ₁₆ x 5 ¹ / ₁₆	64.0	830.00
6020CT	D	0-240/280	35.0	9.8	17 ¹ / ₁₆ x 14 x 7 ¹ / ₁₆	78.0	953.00

Note: Motorized models available also.

PORTABLE MODELS (120 VOLT INPUT SINGLE PHASE)

Cord, matching receptacle, switch, pilot light, fuse, clockwise knob rotation, 3PN line cord receptacles.

Staco Part No.	Fig.	Output Volts	Output Amps	KVA	Size (in.) H x W x D	Sh. Wt. Lbs.	Price Each
3PN171	E	0-132	1.75	0.23	3 ¹ / ₁₆ x 3 ¹ / ₁₆ x 3 ¹ / ₂	3.5	\$126.00
3PN501	E	0-120/140	5.0	0.70	5 ⁵ / ₁₆ x 6 ¹ / ₁₆ x 5 ⁵ / ₁₆	9.0	152.00
3PN1010V	F	0-120/140	10.0	1.4	5 x 6 ⁷ / ₁₆ x 5 ⁵ / ₁₆	12.0	277.00
3PN1010	F	0-120/140	10.0	1.4	5 x 6 ⁷ / ₁₆ x 5 ⁵ / ₁₆	12.0	161.00
3PN1210	F	0-120	12.0	1.44	5 x 6 ⁷ / ₁₆ x 5 ⁵ / ₁₆	12.0	186.00
3PN1510	E	0-120/140	15.0	2.1	5 ⁵ / ₁₆ x 6 ⁷ / ₁₆ x 9	21.0	300.00
3PN2210	F	0-140	22.0	3.08	5 ⁵ / ₁₆ x 7 ⁷ / ₁₆ x 10 ³ / ₁₆	24.0	437.00

PORTABLE MODELS (240 VOLT INPUT SINGLE PHASE)

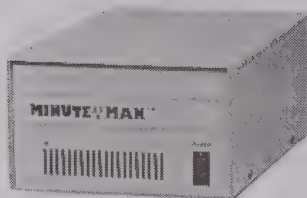
Staco Part No.	Fig.	Output Volts	Output Amps	KVA	Size (in.) H x W x D	Sh. Wt. Lbs.	Price Each
3PN1020	F	0-240/280	3.5	0.98	5 x 6 ⁷ / ₁₆ x 5 ⁵ / ₁₆	12.0	\$195.00
3PN1220	F	0-240*	5.0	1.2	5 x 6 ⁷ / ₁₆ x 5 ⁵ / ₁₆	12.0	224.00
3PN1520	G	0-240/280	9.5	2.66	5 ⁵ / ₁₆ x 6 ⁷ / ₁₆ x 9	21.0	310.00
3PN2520	G	0-280	10.0	2.8	5 ⁵ / ₁₆ x 7 ⁷ / ₁₆ x 10 ³ / ₁₆	27.0	438.00

*60 Hz operation only. Fig. H is the metered model. Ammeter equipped models available on special request. Note: Available in metered models also. CT refers to enclosed coil and terminals.

POWER LINE CONDITIONERS

AC Power Line Conditioners provide voltage regulation, transient suppression and noise filtering to protect computers and computer based systems.

- Cord, plug, receptacles standard up to 8000VA models
- Compact, quiet, cool, efficient sine-wave output
- Bypass switch and circuit breakers standard on SPP2000 Series
- Optional System Station Monitor and Emergency Power-Off in SPP2000 Series

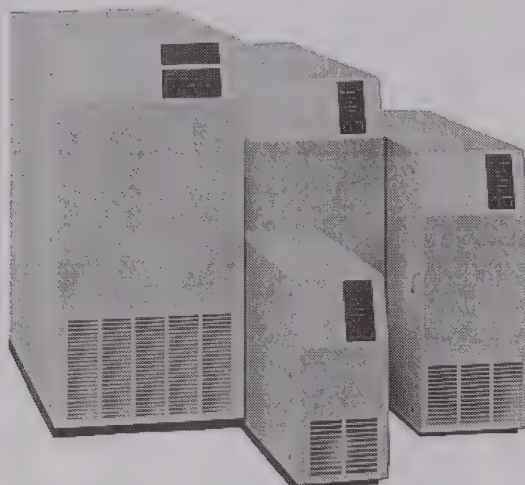


Model	LCR650	LCR1200	SPP2051	SPP2052	SPP2082	SPP2102	SPP2152
Rating (VA)	650	1200	5000	5000	8000	10,000	15,000
Input (VAC)	120	120	120	208/220 or 240	208/220 or 240	208/220 or 240	208/220 or 240
Output (VAC)	120	120	120	120/208 or 240	120/208 or 240	120/208 or 240	120/208 or 240
Dimensions HWD	4x7x10	5x8x11	27x15x26	27x15x26	27x15x26	27x15x26	27x15x26
Weight (lbs.)	14	25	190	190	240	265	300
Price Each	\$142.00	\$245.00	\$2,940.00	\$2,940.00	\$3,650.00	\$3,960.00	\$4,340.00

UNINTERRUPTIBLE POWER SUPPLIES

Staco UPS provides protection from all power problems, plus battery back-up to keep computers and other sensitive electronic equipment on line during outages.

- True sinewave output
- Quiet and efficient
- All models include internal batteries
- Attractive and compact



U10,000

U5000
U1000

U3000

Model	U1000	U3000	U5000	U10,000
Rating (VA)	1000	3000	5000	10,000
Input (VAC)	120	120 or 208-240	120 or 208-240	208-240
Output (VAC)	120	120/208 or 120/240	120/208 or 120/240	120/208 or 120/240
Transfer Time (msec.)	0	0	0	0
Back-Up Time (min.) at half load	30	25	30	30
Dim. HWD	19x8x21	27x10x25	31x15x30	37x18x36
Weight (lbs.)	111	285	502	877
Price Each	\$1,825.00	\$4,350.00	\$6,288.00	\$12,950.00

AC POWER SUPPLIES

(120 VOLTS INPUT SINGLE PHASE)

Totally enclosed with carrying handle, 3 PN line cord, plug and matching receptacle, pilot light, switch, and circuit breaker. Metered models available with voltmeter, ohmmeter, wattmeter or combination.

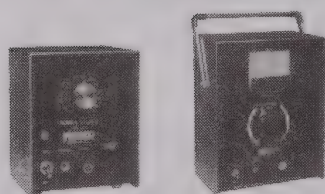


Fig. A

Fig. B

Staco Part No.	Fig.	Output Volts	Output Amps	KVA	Size (in.) H x W x D	Sh. Wt. Lbs.	Price Each
L221	A	0-132	1.75	0.23	6 ⁹ / ₃₂ x 5 x 4 ¹ / ₄	5.0	\$ 150.00
L501	A	0-140	4.5	0.63	7 ²² / ₃₂ x 5 ³ / ₈ x 5 ¹ / ₈	12.0	195.00
L1010	A	0-140	10.0	1.4	9 ¹³ / ₃₂ x 6 ¹ / ₂ x 6 ¹ / ₄	20.0	229.00
L1010V	B	0-120/140	10.0	1.4	12 ³ / ₈ x 10 ³ / ₄ x 6 ¹ / ₄	27.0	479.00
L1010VA	C	0-120/140	10.0	1.4	12 ³ / ₈ x 10 ³ / ₄ x 6 ¹ / ₄	33.0	816.00
L1010VW	C	0-120/140	10.0	1.4	12 ³ / ₈ x 10 ³ / ₄ x 6 ¹ / ₄	35.0	1013.00

THREE PHASE MODELS

These individual units driven by a common shaft and electrically connected in 3-phase wye configuration.

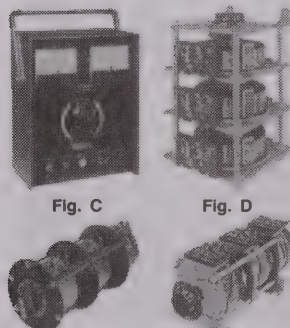


Fig. C

Fig. D

Fig. E

Fig. F

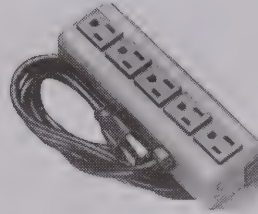
Staco Part No.	Fig.	Input		Output		KVA	Size (in.) H x W x D	Sh. Wt. Lbs.	Price Each
		Volts	Hz.	Volts	Amps				
291-3	E	240	60	0-240	3.0	1.25	3 ⁷ / ₈ x 3 ⁷ / ₈ x 8 ¹ / ₂	9	\$ 259.00
1010-3	E	240	50/60	0-240/280	10.0	4.85	6 ¹ / ₈ x 5 x 14 ¹³ / ₃₂	36	414.00
1510-3	F	240	50/60	0-240/280	15.0	7.26	7 ¹ / ₁₆ x 6 ¹ / ₈ x 14 ⁹ / ₁₆	56	743.00
6010-3Y	D	240	60	0-240/280	60.0	29.1	15 ⁹ / ₁₆ x 13 ³ / ₈ x 19 ⁹ / ₁₆	26	2997.00
252-3	E	480	50/60	0-480/528	0.8	0.73	3 ³ / ₈ x 3 ³ / ₈ x 8 ¹ / ₂	9	305.00
1020-3	E	480	50/60	0-480/560	3.5	3.40	6 ¹ / ₂ x 5 x 14 ¹³ / ₃₂	36	492.00
1520-3	E	480	50/60	0-480/560	9.5	9.20	7 ¹ / ₁₆ x 6 ¹ / ₈ x 15 ¹ / ₁₆	56	734.00
2520-3	F	480	50/60	0-480/560	10.0	9.70	8 ³ / ₈ x 7 ³ / ₈ x 14 ³ / ₈	72	1100.00
6020-3Y	D	480	50/60	0-480/560	35.0	33.9	15 ⁹ / ₁₆ x 13 ³ / ₈ x 19 ⁹ / ₁₆	240	2997.00

V = Voltmeter VA = Voltmeter-Ammeter VW = Voltmeter-Wattmeter 60 Hz operation only

Note: Motorized models available also.

THE COMPACT GROUP

- Size: 8¾" L. × 2½" W. × 1½" H.
- Case Length (excluding mounting tabs): 7¾"
- Maximum Rating: 15 A, 125 VAC, 60 Hz, 1875 W continuous duty
- Outlets: "U" ground
- Seamless steel case with baked-on finish
- Component Color: Black
- Mounting Centers: UL units, 5⅞"; standard units, 8¼"
- Power Cord: 14/3SJT with molded plug
- 608 Series has one outlet on end.

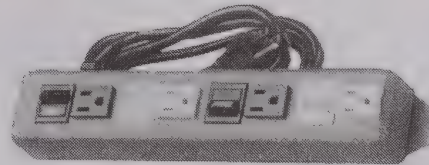


Model Number†	No. of Outlets	Master Switch	Pilot Light	Cord Length	Circuit Breaker	Shipping Wt., Lbs.	Case Color	List Price
602	5	No	No	6'	No	2	Gray	\$14.46
602-15	5	No	No	15'	No	2½	Gray	18.70
UL602CB-6*	5	No	No	6'	Yes	2	Blue	21.82
UL602CB-15*	5	No	No	15'	Yes	2½	Blue	26.02
603CB	4	No	No	6'	Yes	2	Gray	18.63
603CB-15	4	No	No	15'	Yes	2½	Gray	22.85
UL603CB-6*	4	No	No	6'	Yes	2	Blue	20.66
UL603CB-15*	4	No	No	15'	Yes	2½	Blue	24.85
UL605CB-6*	3	Yes	Yes	6'	Yes	2	Blue	23.50
UL605CB-15*	3	Yes	Yes	15'	Yes	2½	Blue	27.75
UL608CB-6*	4	Yes	Yes	6'	Yes	2	Blue	25.17
UL608CB-15*	4	Yes	Yes	15'	Yes	2½	Blue	29.42

†Units with the UL prefix are UL listed. *CSA certified.

THE MID-LENGTH GROUP

- Size: 13¼" L. × 2¾" W. × 1½" H.
- Case Length (excluding mounting tabs): 11¾"
- Mounting Centers: UL units, 10⅞"; standard units, 12¼"
- Maximum Rating: 15 A, 125 VAC, 60 Hz, 1875 W continuous duty
- Outlets: "U" ground
- Seamless steel case with baked-on finish
- Component Colors: Black (32P Series has alternating black and white)
- Power Cord: 14/3SJT with molded plug

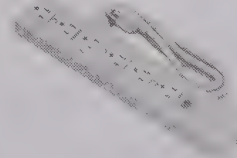
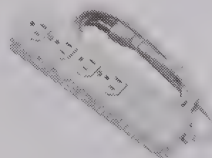


Model Number†	No. of Outlets	No. of Switch/Pilot Light	Circuit Breaker	Cord Length	Shipping Wt., Lbs.	List Price
15CB	7	1	Yes	6'	2	\$30.70
15CB-15	7	1	Yes	15'	2½	34.93
UL15CB-6*	7	1	Yes	6'	2½	32.02
UL15CB-15*	7	1	Yes	15'	3	36.26
UL17CB-6	9	0	Yes	6'	2½	30.20
UL17CB-15	9	0	Yes	15'	3	34.40
UL18CB-6	9	0	Yes	6'	2½	31.52
UL18CB-15	9	0	Yes	15'	3	35.77
24CB	6	1	Yes	6'	2	27.91
24CB-15	6	1	Yes	15'	2½	32.15
UL24CB-6*	6	1	Yes	6'	2½	28.57
UL24CB-15*	6	1	Yes	15'	3	32.82
UL32PCB-6*	4	4	Yes	6'	2½	43.39
UL32PCB-15*	4	4	Yes	15'	3	47.59

†Units with the UL prefix are UL listed; 15 and 17 series have one outlet on end; 32P series have each outlet controlled by a switch with built-in pilot light. *CSA certified.

THE PREMIER GROUP

- UL listed
- All have circuit breakers
- Maximum Rating: 15 A, 125 VAC, 60 Hz, 1875 W, continuous duty
- Outlets: "U" ground duplex ivory
- Seamless steel case with baked or beige finish
- Power Supply Cord: 14/3SJT with molded plug, beige

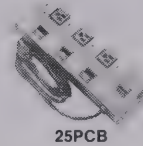


Model Number	No. of Outlets	Master Switch w/Pilot Light	Dimensions			Mtg. Centers	Cord Length	Shipping Wt., Lbs.	List Price
			Length	Width	Height				
ULA4E-6	4	No	9¼"	2⅝"	1"	8¼"	6'	2	\$15.95
ULA4E-15	4	No	9¼"	2⅝"	1"	8¼"	15'	2½	19.95
ULA4TME-6	4	Yes	9¼"	2⅝"	1"	8¼"	6'	2	18.95
ULA4TME-15	4	Yes	9¼"	2⅝"	1"	8¼"	15'	2½	22.95
ULA6E-6	6	No	11⅞"	2⅝"	1"	10⅞"	6'	2	21.95
ULA6E-15	6	No	11⅞"	2⅝"	1"	10⅞"	15'	2½	24.95
ULA6TME-6	6	Yes	11⅞"	2⅝"	1"	10⅞"	6'	2	24.95
ULA6TME-15	6	Yes	11⅞"	2⅝"	1"	10⅞"	15'	2½	28.95

BE SURE TO WATCH FOR OUR "POWER SOURCE" BROCHURES.

THE DELUXE GROUP

- UL Listed
- **Case size:** 13¹/₈" L. × 4¹/₄" W. × 1¹/₂" H.
- **Maximum rating:** 15 A, 125 VAC, 60 Hz, 1875 W continuous duty
- **Protection:** All have circuit breakers
- **Case:** Fabricated steel with baked-on blue finish
- **Component colors:** Black except as noted below



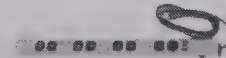
25PCB

Model Number†	No. of Outlets	Master Switch Pilot Light	Individual Switch Pilot Lights	Power Supply Cord	Cord Length	Mounting Centers	Shipping Wt., Lbs.	List Price
UL25PCB-6*	7	Yes	Yes	14/3SJT	6'	10 ¹ / ₈ " × 2 ³ / ₄ "	3	\$70.75
UL25PCB-15*	7	Yes	Yes	14/3SJT	15'	10 ¹ / ₈ " × 2 ³ / ₄ "	4	75.00
UL800CB-6	10	Yes	No	14/3SJT	6'	10 ¹ / ₈ " × 2 ³ / ₄ "	3	43.80
UL800CB-15	10	Yes	No	14/3SJT	15'	10 ¹ / ₈ " × 2 ³ / ₄ "	4	48.05

† UL25PCB Series has alternating black and white switch and outlet configurations. * CSA Certified

THE TRIM-LINE GROUP

- UL Listed
- **Outlets:** "U" ground
- **Maximum rating:** 15 A, 125 AC, 60 Hz, 1875 W continuous duty
- **Component color:** Black
- **Power cord:** 14/3STT with molded plug
- **Case:** Fabricated steel with baked on blue finish



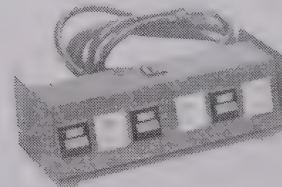
7208

Model Number	No. of Outlets	Overall Dimensions			Mounting Centers	Master Switch Pilot Light	Circuit Breaker	Cord Length	Shipping Wt., Lbs.	List Price
		Length	Width	Height						
UL7208-6	8	25"	2"	1"	22 ¹ / ₈ "	Yes	Yes	6'	3 ¹ / ₂	\$43.14
UL7208-15	8	25"	2"	1"	22 ¹ / ₈ "	Yes	Yes	15'	4 ¹ / ₄	47.34
UL7408-6*	8	49"	1 ¹ / ₂ "	1 ³ / ₈ "	46 ¹ / ₈ "	Yes	Yes	6'	4 ¹ / ₂	50.90
UL7408-15*	8	49"	1 ¹ / ₂ "	1 ³ / ₈ "	46 ¹ / ₈ "	Yes	Yes	15'	5 ¹ / ₄	55.15
UL7415-6	15	49"	1 ¹ / ₂ "	1 ³ / ₈ "	46 ¹ / ₈ "	Yes	Yes	6'	4 ¹ / ₂	59.78
UL7415-15	15	49"	1 ¹ / ₂ "	1 ³ / ₈ "	46 ¹ / ₈ "	Yes	Yes	15'	5 ¹ / ₄	64.03
UL7610-6	10	73"	1 ¹ / ₂ "	1 ³ / ₈ "	70 ¹ / ₈ "	Yes	Yes	6'	6 ³ / ₄	60.85
UL7610-15	10	73"	1 ¹ / ₂ "	1 ³ / ₈ "	70 ¹ / ₈ "	Yes	Yes	15'	7 ¹ / ₂	65.10
UL7619-6	19	73"	1 ¹ / ₂ "	1 ³ / ₈ "	70 ¹ / ₈ "	Yes	Yes	6'	6 ³ / ₄	70.95
UL7619-15	19	73"	1 ¹ / ₂ "	1 ³ / ₈ "	70 ¹ / ₈ "	Yes	Yes	15'	7 ¹ / ₂	75.15

* CSA certified

THE CONSOLE GROUP

- UL listed
- **Case:** Wood-grained vinyl permanently adhered to metal; heavy steel base with baked-on black finish
- **Outlets:** Black "U" ground outlets on back of unit
- **Switches:** Each outlet controlled by a single switch with built-in pilot light; alternate black and white switches
- **Power supply cord:** 14/3SJT with molded plug; black
- **Protection:** All equipped with circuit breakers
- **Maximum rating:** 15 A, 125 VAC, 60 Hz, 1875 W continuous duty
- **Mounting:** Four protective rubber feet—no provisions for mounting by fastening



Model Number	No. of Outlets	No. of Switch/ Pilot Lights	Overall Dimensions			Cord Length	Shipping Wt., Lbs.	List Price
			Length	Width	Height			
UL96CB-6	6	6	9 ³ / ₈ "	3 ³ / ₄ "	3 ³ / ₈ "	6'	3	\$64.05
UL96CB-15	6	6	9 ³ / ₈ "	3 ³ / ₄ "	3 ³ / ₈ "	15'	4	67.33

THE PERMANENT INSTALLATION GROUP

- UL listed
- **Maximum rating:** 15 A, 125 VAC, 60 Hz, 1875 W continuous duty
- **Outlets:** "U" ground beige
- **Internal wiring:** Insulated 14 AWG, TW
- **Case:** Fabricated steel with beige baked-on finish
- **1/2"** knockouts located on each end

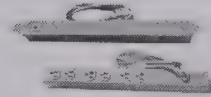
- Twist-on wire connectors and self-tapping screws for attachment of top assembly to back mounting cover are provided.
- Back cover mounting holes ³/₁₆" diameter.



Model Number	Dimensions			No. of Outlets	Outlet Centers	No. Mtg. Holes	Mtg. Hole Distances		Shipping Wt., Lbs.	List Price
	Length	Width	Height				From Ends	Center to Center		
4305	3'	1 ⁹ / ₃₂ "	1 ³ / ₈ "	5	7"	2	8"	20"	3	\$31.55
4309	3'	1 ⁹ / ₃₂ "	1 ³ / ₈ "	9	3 ¹ / ₂ "	2	8"	20"	3	34.40
4407	4'	1 ⁹ / ₃₂ "	1 ³ / ₈ "	7	7"	3	8"	16"	4	39.28
4413	4'	1 ⁹ / ₃₂ "	1 ³ / ₈ "	13	3 ¹ / ₂ "	3	8"	16"	4	43.00
4508	5'	1 ⁹ / ₃₂ "	1 ³ / ₈ "	8	7"	3	8"	22"	5	40.78
4515	5'	1 ⁹ / ₃₂ "	1 ³ / ₈ "	15	3 ¹ / ₂ "	3	8"	22"	5	47.00
4610	6'	1 ⁹ / ₃₂ "	1 ³ / ₈ "	10	7"	3	8"	28"	6	45.22
4619	6'	1 ⁹ / ₃₂ "	1 ³ / ₈ "	19	3 ¹ / ₂ "	3	8"	28"	6	56.32

THE RACK-MOUNT GROUP

- UL Recognized
- **Maximum rating:** 15 A, 125 VAC, 60 Hz, 1875 W continuous duty
- **Outlets:** 3 duplex "U" ground
- **Case:** Fabricated steel with back cover; black baked-on finish
- Combination master switch with built-in pilot light on front panel
- **Power supply cord:** 14/3 SJT with molded plug
- **Protection:** all have circuit breakers
- **Component colors:** outlets and cord, black

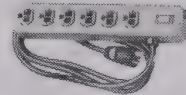


Model Number	No. of Outlets*	Front Plate	Back Cover	Mtg. Centers	Shipping Wt. Lbs.	List Price
900CB	6-F	19" L. x 3 1/32" W.	17" L. x 3 1/32" W. x 2 3/4" D.	18 1/4" x 3"	3	\$46.08
900CB-15	6-F	19" L. x 3 1/32" W.	17" L. x 3 1/32" W. x 2 3/4" D.	18 1/4" x 3"	3 1/2	50.88
903CB	6-F	19" L. x 1 23/32" W.	17" L. x 1 1/4" W. x 2 3/4" D.	18 1/4" x 1 1/4"	2 1/2	43.65
903CB-15	6-F	19" L. x 1 23/32" W.	17" L. x 1 1/4" W. x 2 3/4" D.	18 1/4" x 1 1/4"	3	47.88
904CB	2-F, 4-B	19" L. x 3 1/32" W.	17" L. x 3 1/32" W. x 2 3/4" D.	18 1/4" x 3"	3	48.36
904CB-15	2-F, 4-B	19" L. x 3 1/32" W.	17" L. x 3 1/32" W. x 2 3/4" D.	18 1/4" x 3"	3 1/2	52.62
911CB	6-F	19" L. x 1 23/32" W.	17" L. x 1 1/4" W. x 2 3/4" D.	18 1/4" x 1 1/4"	2 1/2	46.08
911CB-15	6-F	19" L. x 1 23/32" W.	17" L. x 1 1/4" W. x 2 3/4" D.	18 1/4" x 1 1/4"	3	50.33

* F denotes front panel; B denotes back panel.

THE 20-AMP RATED GROUP

- UL listed
- **Protection:** circuit breaker
- **Maximum rating:** 20 A, 125 VAC, 60 Hz, 2500 W continuous duty.
- **Outlets:** "U" ground duplex, brown color
- Seamless steel case with baked-on blue finish
- **Power supply cord:** 12/3 SJO, with 20 Amp plug
- Master on-off switch with built-in pilot light.



Model Number	No. of Outlets	Size, Inches			Mtg. Centers	Cord Length	Shipping Wt., Lbs.	Net Each 1-9
		Length	Width	Height				
UL620-6	6	13 1/4"	2 5/16"	1 1/2"	10 5/16"	6'	2	\$73.49
UL620-15	6	13 1/4"	2 5/16"	1 1/2"	10 5/16"	15'	2 1/2	78.56

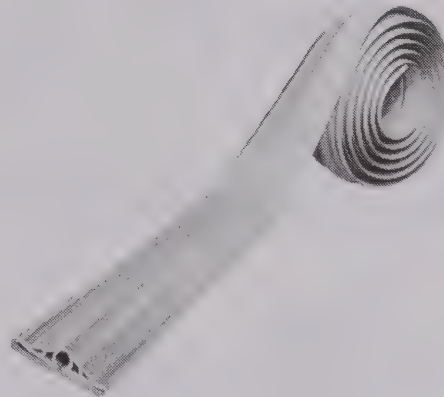
CORDGARD® ELECTRICAL CORD DUCTING

For all hazardous and ugly electrical wires running across the floor, Cordgard over-the-floor electrical cord ducting provides a quick, inexpensive, and attractive means of protecting and covering electrical cords.

- Utility grade vinyl
- Colors: beige, brown (others available on special order)
- Ribbed slots on bottom prevent sliding
- Available with or without double-faced tape
- Will accommodate any wire or cord equivalent to 14/3SJT or less

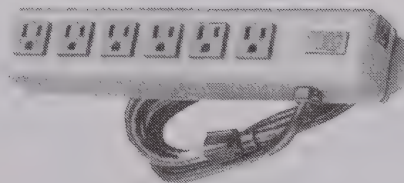
Model Number	Length, Feet	Size, Inches		Diameter of center hole	Weight Lbs.	Color	List Price
		W	H				
G-6-BE	6	3	7/16	7/16"	3	Beige	\$13.95
G-6-BEX	6	3	7/16	7/16"	3	Beige	11.50
G-6-BR	6	3	7/16	7/16"	3	Brown	13.95
G-6-BRX	6	3	7/16	7/16"	3	Brown	11.50
G-15-BE	15	3	7/16	7/16"	6	Beige	30.95
G-15-BEX	15	3	7/16	7/16"	6	Beige	25.95
G-15-BR	15	3	7/16	7/16"	6	Brown	30.95
G-15-BRX	15	3	7/16	7/16"	6	Brown	25.95
G-50-BE	50	3	7/16	7/16"	19	Beige	95.95
G-50-BEX	50	3	7/16	7/16"	19	Beige	83.95
G-50-BR	50	3	7/16	7/16"	19	Brown	95.95
G-50-BRX	50	3	7/16	7/16"	19	Brown	83.95

* X in part number denotes no tape included.



90° DESIGN GROUP

- UL listed, CSA certified
- **Protection:** All have circuit breakers, black color
- **Maximum Rating:** 15 A, 125 VAC, 60 Hz, 1875 W, continuous duty
- **Outlets:** "U" ground, black
- Seamless steel case with baked-on blue finish
- **Power Supply & Cord:** 14/3SJT with molded-on plug black
- Master switch pilot light



Model Number	No. of Outlets	Size, Inches			Mounting Centers	Cord Length	Shipping Wt., Lbs.	List Price
		Length	Width	Height				
UL24RA-6	6	13 1/4"	2 3/8"	1 1/2"	10 5/16"	6'	2 1/2	\$29.74
UL24RA-15	6	13 1/4"	2 3/8"	1 1/2"	10 5/16"	15'	3	33.99

Same as UL24CB Series except receptacles are turned 90°.

**DATAGARD FAXSAVE OFFICE GRADE POWER CONDITIONERS
FOR MODEMS, ANSWERING MACHINES, ELECTRONIC TELEPHONE SYSTEMS AND COMPUTERS**

Protects sensitive electronic communications equipment from loss of critical data and serious damage to any office or home electronic equipment with communications capabilities. Protects against dangerous electrical surges and virtually all noise coming through wall outlets. Fully tested to UL 1449 standard which insures they meet 400 V clamping level specified. Backed by a lifetime warranty.

Surge Indication: Visual surge indicator light lets you see at a glance if surge protection is functioning.

3-Line Voltage Protection: Insures that unit is isolated from transients on all incoming power lines.

Power Overloads: Push-to-reset, 15 A circuit breaker protection guards against power overloads.

RJ-11 Jacks: 1/1 input/output.

Max. Surge Current: (8 × 20 Microsecond Surge Pulse): 6500 V.

Modes of Surge Protection: Tip to ground, Ring to ground.

Clamping Response Time: 1 nsec. typical.

Operating Line Voltage: 120VAC.

Operating Line Current: 15 amps max.; push-to-reset circuit breaker.

Frequency: 60 Hz.

Operating Temperature: -40°F to +158°F.

UL 1449 Suppressed Voltage: 400 V.

Max. Surge Voltage: 6000 V.

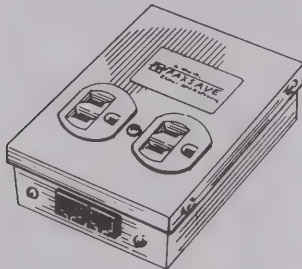
Max. Energy Dissipation: 210 Joules (3 × 70).

Modes of Noise Rejection: Transverse.

Noise Rejection: Up to 35 dB.

Case: Drawn steel with baked enamel finish. (FG-2, DG415S) Plastic (FG-1).

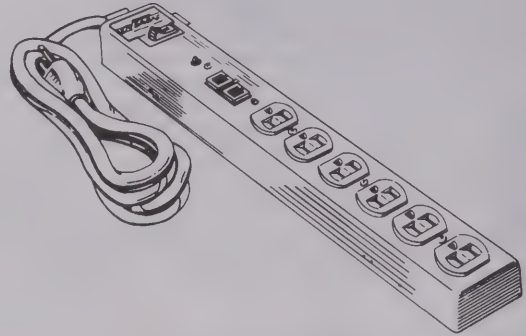
MODEL FG2 FAXSAVE



Two outlet plug-in unit. **Size:** 3¼" W × 4²⁷/₃₂" L × 1¹⁵/₁₆" H. **Shipping Weight:** 1 lb.

Waber Model FG2—Price Each \$49.95

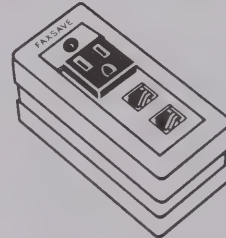
MODEL DG415-S FAXSAVE



Six outlet strip with 6 ft. double-insulated cord with 3-prong grounding insulated plug. Master switch safely shuts off when unit is not in operation. Built-in pilot light lets you tell at a glance if unit is working. **Size:** 2¼" W × 11¹⁵/₁₆" L × 1" H. **Shipping Weight:** 3 lbs.

Waber Model DG415-S—Price Each \$64.95

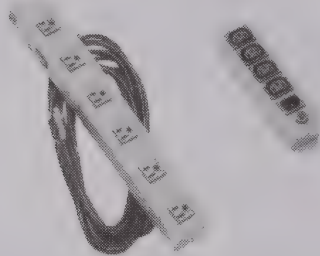
MODEL FG-1 FAXSAVE



Single outlet plug-in unit. **Size:** 2" W × 4½" L × 2" H. **Shipping Weight:** 6 oz.

Waber Model FG-1—Price Each \$39.95

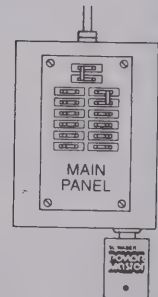
**SPECIAL APPLICATION MULTIPLE OUTLET
STRIPS/SURGE SUPPRESSORS**



If you can't find the one model that fits your application, our Engineering and R & D Departments will research, design and quote a product to fit your specific needs. If you need 50 or more multiple outlet strips or surge suppressors, SL Waber has the expertise to help you develop a product with one or all of the following variations:

- Case size and shape
- Relocation of components
- Increased or decreased number of outlets, switches, pilot lights, fuses, circuit breakers
- Special grade outlets, times, motors, switches, pilot lights
- Split phase or different capacity circuits
- 1 amp to 20 amps; 1 volt to 250 volts AC
- European components and designs
- Filtered outlet strips, both surge and noise
- Length, type and size of power supply cord
- Special configurations to meet local code requirements
- Over 480 UL listed and 310 CSA certified non-stocking designs are available to meet your specific needs

**POWER MASTER® WHOLE HOUSE SURGE
ARRESTER/MODEL WH1**



Everyday power surges ruin valuable household equipment. These harmful surges, or spikes, of up to 6000 volts are caused by commonly occurring events such as lightning strikes and utility line maintenance. The Power Master® Whole House Surge Arrestor absorbs the excess energy and protects sensitive equipment by maintaining safe operating voltage levels.

Maximum Surge Current: 26,500 Amps

Surge Indicator: Visual

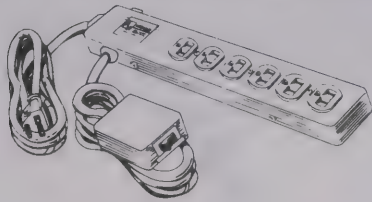
Response Time: Less than 1 nanosecond

Operating Line Voltage: 120 VAC (2 phase)

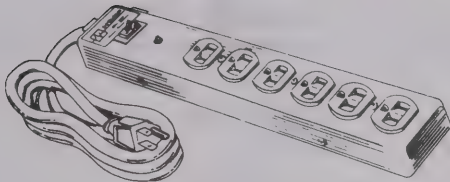
Mounts easily to circuit breaker panel box

Waber Model WH1—Price Each \$69.95

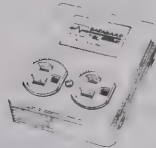
DATAGARD® SURGE AND NOISE SUPPRESSORS



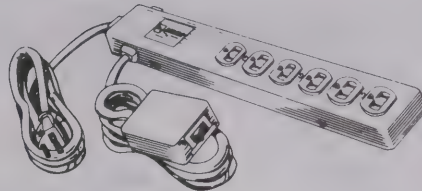
Model 115-SR



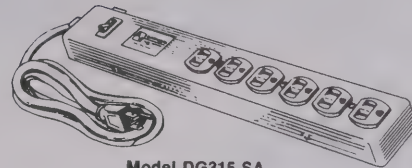
Model 115-SI



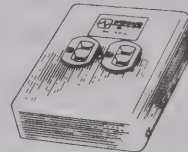
Model DG115-PI



Model DG315-SR



Model DG315-SA



Model DG315-PA

Designed to protect computers against system downtime, equipment failure, erroneous data and added service expenses due to spike and electronic noise disturbances on the power line, Datagard 115 Series (multi-stage spike and noise filter) and Datagard 315 Series (multi-stage spike and heavy-duty noise filter) protect against moderate to catastrophic spikes, and virtually all unwanted noise interference coming in on the power line. Prevents loss of stored data, false input/output, and equipment failure. All Datagard products are fully tested to the stringent UL Standard 1449, and backed by a lifetime warranty.

GENERAL SPECIFICATIONS

Max. Spike Energy Dissipation: 210 joules (3 × 70) (except 315R)
Modes of Surge Protection: H-N, H-G, N-G (except 315R).
Max. Spike Voltage: 6000 V*.
UL 1449 Suppressed Voltage Rating: 400 V.
Surge Current Clamping Ratio: No greater than 2:03:1.
Max. Spike Current: 6500 amps*.
Clamping Response Time: 1 nsec. or less.
Noise Rejection Frequency Range: 150 KHz to 100 MHz.
Attenuation: up to 35 dB. (115): 20-60 dB (315)
Mode Noise Protection: Transverse, (115) transverse & common 315.
Operating Temperature: -40°C to +70°C (-40°F to +158°F).
Max. Electrical Rating: 15 A, 120 VAC, 60 Hz, 1875 W, continuous duty.
 *Based on an 8 × 20 μs pulse.

MODEL DG115-PI

Provides one "U" ground duplex (2 outlets). Conveniently plugs into any 120 VAC outlet (normal house current). Multi-stage filter. Indicator light shows when surge protection is functioning. 15 amp circuit breaker. Fabricated steel case with baked-on beige finish. **Size:** 4²⁷/₃₂" L. × 3¹/₄" W. × 1⁵/₁₆" D. **Weight:** 9 oz.

Waber Model DG115-PI—List Price \$34.95

MODEL DG115-SI

Provides 3 "U" ground duplexes (6 outlets) and 6 ft., 14/3 SJT power supply cord. Multi-stage filter on each duplex. Master switch with built-in pilot light. 15 amp circuit breaker. Visual surge indicator light shows if surge protection is functioning. Seamless steel case with baked-on beige finish. Keyholes slots for flush mounting; slots on 10¹⁵/₁₆" centers. **Size:** 14" L. × 2¹/₄" W. × 1¹/₄" D. **Weight:** 2¹/₂ lbs.

Waber Model DG115-SI—List Price \$49.95

MODEL DG115-SR

Surge and noise suppressor provides 3 "U" ground duplexes (6 outlets), 6-ft. 14/3 SJT power supply cord. Multi-stage filter on each duplex. Up to 35 dB noise rejection. Master switch with built-in pilot light. 15-amp circuit breaker. Audible alarm sounds if surge protection is not functioning. 4¹/₂ ft. cord with lighted remote switch allows for convenient fingertip control. Drawn steel with baked on beige finish. **Size:** 2¹/₄" W. × 14" L. × 1¹/₄" H. **Weight:** 3 lbs.

Waber Model DG115-SR—List Price \$69.95

MODEL DG315-PA

Provides one "U" ground duplex (2 outlets). Conveniently plugs into any 120 VAC outlet (normal house current). Multistage filter network. Each stage has spike protection. Audible alarm sounds if surge protection is not functioning. 15 amp circuit breaker. Fabricated steel case with baked-on beige finish. **Size:** 5¹/₂" L. × 4¹/₂" W. × 1¹/₄" D. **Weight:** 2 lbs.

Waber Model DG315-PA—List Price \$54.95

Provides 3 duplexes (6 outlets), and 6 ft. 14/3 SJT power supply cord. Multistage filter network. Each outlet has spike protection. 15 amp circuit breaker. Audible alarm sounds if surge protection is not functioning. Fabricated steel case with baked-on beige finish. Keyhole slots for flush mounting. **Size:** 15¹/₄" L. × 2¹/₄" W. × 1¹/₄" D. **Weight:** 3¹/₂ lbs.

Waber Model DG315-SA—List Price \$69.95

MODEL DG315-SA

MODEL DG315-R

Provides 3 duplexes (6 outlets), and 6-ft. 14/3 SJT power supply cord. Multistage filter network. Each outlet has spike protection. 15 amp circuit breaker. Brushed chrome steel front plate. Fabricated steel back with baked-on black finish. 19" rack or panel mount. **Size:** front plate, 19" L. × 1²³/₃₂" W.; back cover, 19" L. × 1²³/₃₂" W. × 2¹/₈" D. **Mounting Centers:** 18¹/₄" L. × 1¹/₄" W. **Weight:** 7 lbs.

Waber Model DG315-R—List Price \$110.00

MODEL DG315-SR

Surge and noise suppressor provides 3 duplexes (6 outlets), 6ft. 14/3 SJT power supply cord. Multi-stage filter on each duplex. 20-60 dB noise rejection. Master switch with built-in pilot light. 15 amp circuit breaker. Audible alarm sounds if surge protection is not functioning. 4¹/₂ ft. cord with lighted remote switch allows for convenient fingertip control. Drawn steel with beige baked enamel finish. **Size:** 2¹/₄" W. × 15¹/₄" L. × 1¹/₄" H. **Weight:** 4 lbs.

Waber Model DG315-SR—List Price \$89.95

MODEL DG204

Provides 2 duplexes (4 outlets), 6 ft. 14/3 SJT power supply cord, 3-line voltage surge protection. 15 amp circuit breaker. Master switch. Built-in pilot light shows if unit is working. Drawn steel with baked on beige finish. **Size:** 2³/₈" W. × 9¹/₄" L. × 1" H. **Weight:** 1¹/₂ lbs.

Waber Model DG204—List Price \$24.95

MODEL DG206

Provides 3 duplexes (6 outlets), 6 ft. 14/3 SJT power supply cord, 3-line voltage surge protection, 15 amp circuit breaker. Master switch. Built-in pilot light shows if unit is working. Drawn steel with baked on beige finish. **Size:** 2³/₈" W. × 11¹⁵/₁₆" L. × 1" H. **Weight:** 2 lbs.

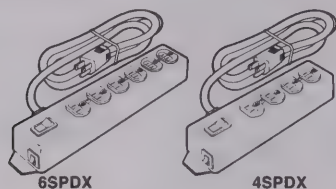
Waber Model DG206—List Price \$29.95

MODEL DG4-20A 20 AMP SURGE PROTECTOR

Provides 2 duplexes (4 outlets), 6 ft. 12/3 SJT Power cord. 3-line voltage surge protection. 20 amp circuit breaker. Drawn steel with baked-on beige finish. **Size:** 2³/₈" W. × 7³/₈" L. × 1¹/₂" H.

Waber Model DG4-20A—List Price \$89.95

POWERMASTER® MULTIPLE OUTLET STRIPS



Models 4SPDX and 6SPDX safely convert one outlet into 4 or 6 outlets. Now you can safely eliminate short-circuiting and overloading. The SL Power Master features a self-activating circuit breaker that shuts off power whenever a power overload occurs. Both models are UL listed, factory tested and exceed National Electrical Code requirements.

Features:

- UL listed
- Circuit breaker protection
- Steel case grounded for safety
- "U" grounded outlets
- Switch/Pilot Light to shut off power when not in use
- Heavy duty 6 foot or 15 foot cord
- Max. Rating: 15A @ 125V AC, 1875 watts continuous duty
- Easy keyhole slot mounting

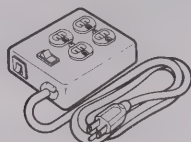
Model 4SPDX (8¾" long with 4 outlets)—List Price..... **\$13.95**

Model 6SPDX (13¼" long with 6 outlets)—List Price..... **\$15.95**

Model 4SPDX-15 (8¾" long with 4 outlets)—15 foot cord
List Price..... **\$17.90**

Model 6SPDX-15 (13¼" long with 6 outlets) 15 foot cord
List Price..... **\$19.75**

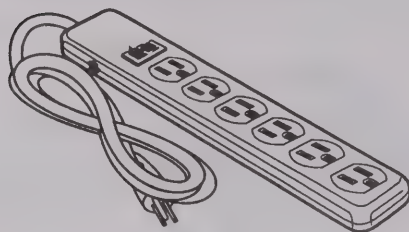
MODEL 4NQ



Four-outlet, square unit with 6-ft., heavy-duty power cord and on/off switch.

Waber Model 4NQ—List Price..... **\$14.95**

MODEL PS-6



6 outlet, high-impact thermoplastic with 4-ft., heavy duty cord, and on-off switch.

Waber Model PS-6—List Price **\$9.99**

POWERMASTER® ELECTRONICS PROTECTORS

Complete protection for TVs, stereos, personal computers, VCRs and microwaves. Protects against power surges produced by lightning, utility maintenance or electric motor noise from switching on and off. These surges can produce permanent damage to sensitive equipment. Units absorb surges up to 6000 V. UL listed and tested to UL Standard 1449.

MODEL PM-1



Single outlet, plug-in unit. Side indicator window to show when surge protection is functioning.

Waber Model PM-1—List Price **\$9.95**

MODEL PM6-P



Six-outlet, plug-in unit. Side indicator light to show when surge protection is functioning.

Waber Model PM6-P—List Price..... **\$14.95**

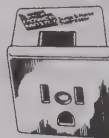
MODEL PM6-S



Six-outlet strip with 6-ft., heavy-duty power cord. Indicator light shows when surge protector is functioning.

Waber Model PM6-S—List Price..... **\$19.95**

MODEL PM1-N



Single outlet surge and noise suppressor plug-in unit. Side indicator window to show when surge protection is functioning.

Waber Model PM1-N—List Price **\$14.95**

MODEL PM6-NP

Six outlet surge and noise suppressor plug-in unit. Side indicator light to show when surge protection is functioning.

Waber Model PM6-NP—List Price **\$17.95**

MODEL PM6-NS



Six outlet surge and noise suppressor strip with 6-ft., heavy-duty power cord. Indicator light shows when surge protection is functioning.

Waber Model PM6-NS—List Price **\$23.95**

**THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS
WE HAVE AVAILABLE. PLEASE
CONTACT US FOR ADDITIONAL PRODUCT INFORMATION.**

MEDGARD® MULTIPLE OUTLET STRIPS AND SURGE SUPPRESSORS WITH HOSPITAL GRADE COMPONENTS

All Medgard® products are UL approved. These models feature HD hospital grade plug and cord, HD hospital grade receptacle, durable steel casing and a circuit breaker for extra safety. All electrical components used in our Medgard® products are approved by UL as hospital grade. In addition, these products have been tested by UL to standard 544 and have passed all appropriate tests.

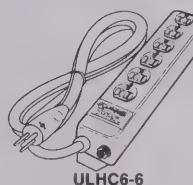
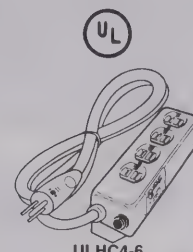
MULTIPLE OUTLET STRIPS

UL LISTED: TESTED TO UL STANDARD 544

The SL Waber Medgard® outlet strips are manufactured especially for use in hospital and laboratory environments. These strips offer the advantage of hospital grade components and are UL listed. Ideal for instrument carts and laboratory workbenches.

- **Protection:** Circuit breaker
- **Max. Rating (Continuous Duty):** 15A @ 125 VAC, 1875 Watts
- **Outlets:** Hospital Grade duplex (white color)
- **Case:** Seamless steel with baked-on white finish
- **Power Cord:** Hospital Grade, 14/3 SJT
- **Plug:** Molded
- **Mounting:** Flush, keyhole-slot

Model Number	No. of Outlets	Power Cord Length	Dimensions			Shipping Weight	Price Each
			W.	L.	H.		
ULHC4-6	4	6 ft.	2 3/4"	8 3/4"	1 1/2"	2.5 lbs.	\$47.95
ULHC4-15	4	15 ft.	2 3/4"	8 3/4"	1 1/2"	3.0 lbs.	\$2.95
ULHC6-6	6	6 ft.	2 3/4"	13 1/4"	1 1/2"	2.5 lbs.	\$8.95
ULHC6-15	6	15 ft.	2 3/4"	13 1/4"	1 1/2"	3.0 lbs.	\$3.95



SURGE SUPPRESSORS

UL LISTED: TESTED TO UL STANDARD 1449

The Medgard® Series hospital grade surge and noise suppressors have superior protection for use in hospitals and laboratory environments. This series offers superior voltage breakdown, ground integrity and low leakage current with patented three (3) stage protection.

- **Surge Indication:** Visual
- **Max. Surge Current:** 11505 Amps
- **Max. Surge Energy:** 291 Joules
- **Max. Surge Voltage:** 6000 Volts
- **Hot Neutral:** Mode of surge protection
- **Clamping Response Time:** 1 Picosecond

Model Number	No. of Outlets	Power Cord Length	Dimensions			Shipping Weight	Price Each
			W.	L.	H.		
MGS4-6	4	6 ft.	2 3/4"	13 1/4"	1 1/2"	2.1 lbs.	\$83.95
MGS4-15	4	15 ft.	2 3/4"	13 1/4"	1 1/2"	2.6 lbs.	\$8.95
MGS6-6	6	6 ft.	2 3/4"	17"	1 1/2"	2.9 lbs.	\$5.95
MGS6-15	6	15 ft.	2 3/4"	17"	1 1/2"	3.4 lbs.	\$9.95



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WAVE TRACKER™ NOISE AND SURGE FILTERS



WT2P



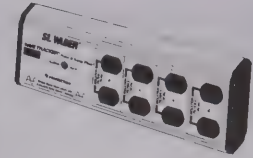
WT4



WT4M



WT6



WT8

Wave Tracker™ Series provides the ultimate in noise filtration and surge protection. The Wave Tracker's™ Sine Wave Tracking feature ensures a close clamp on incoming voltage transients. Surge and noise isolation prevents interference between devices plugged into the same unit while the series noise filtration design allows you to determine how much noise protection is necessary. The higher the decibel (dB) value, the more noise protection selected. The Wave Tracker™ also comes equipped with both audible and visual alarms to signal the user in the unlikely event that surge protection has been damaged due to a large power surge. Wave Tracker™ products meet or exceed standards set forth by UL, CSA, IEEE, ANSI, and NEMA.

Operating Line Voltage: 125V
Operating Line Current: 15A max.
Load Handling: 1875W, continuous
Frequency: 60 Hz
Max. Surge Voltage: 6000V
Clamping Response Time: 1 psec. (typ.)
Operating Temperature: -13°F to 140°F
Operating Humidity (non-condensing): 0-95%

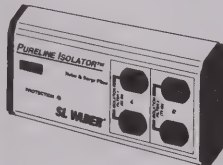
Cord Length: 6 ft. (except WT2P)
Circuit Breaker: 15A
UL 1449 Rating: 330V
Modes of Protection: H-N, H-G, N-G
Power Cord: SJT 14/3
Noise Frequency: 150 KHz- 100 MHz
Noise Rejection: Transverse and Common
Color: Silver housing, black receptacles, end caps and cords.

Model No.	Outlets	Noise Filtration				Max. Energy Dissipating (H-N) (Joules)	Max. Surge Current (H-N) (Amps)	Size (In.) L x W x D	Weight (Approx.)	List Price
		1st	2nd	3rd	4th					
WT2P	2	75 dB	—	—	—	485	33,025	6 3/4" x 3 3/4" x 2 1/4"	1.25 lb.	\$ 59.95
WT4	4	75 dB	100 dB	—	—	555	39,525	9 1/4" x 3 3/4" x 2 1/4"	2.25 lb.	94.95
WT4M*	4	75 dB	100 dB	—	—	555	39,525	10 3/4" x 3 3/4" x 2 1/4"	2.30 lb.	114.95
WT6	6	75 dB	100 dB	110 dB	—	625	46,025	11 1/4" x 3 3/4" x 2 1/4"	2.50 lb.	114.95
WT6SS	6	80 dB	103 dB	110 dB	—	625	46,025	13" x 3 3/4" x 2 1/4"	2.75 lb.	124.95
WT8	8	75 dB	100 dB	110 dB	125 dB	695	52,525	13" x 3 3/4" x 2 1/4"	3.00 lb.	129.95

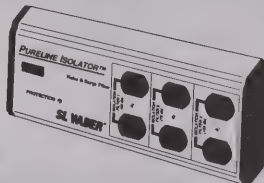
PURELINE ISOLATOR™ NOISE AND SURGE FILTER



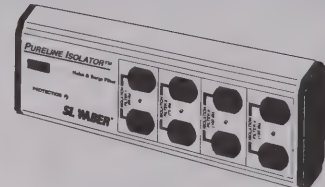
PI2



PI4



PI6



PI8

The Pureline Isolator™ offers superior noise filtration and surge suppression for all types of sensitive electronic equipment. The design isolates each filter between duplexes to prevent interference between devices. Wiring the filters in series allows the Pureline Isolator™ the ability to offer a variety of filtration levels and the higher the decibel (dB) value chosen by the user, the greater noise protection selected and eliminates virtually all low voltage surges.

Model No.	Max. Energy Dissipation (H-N) (Joules)	Max. Surge Current (H-N) (Amps)
Model PI2	140	13,000
Model PI4	210	19,500
Model PI6	280	26,000
Model PI8	350	32,500

Operating Line Voltage: 120V
Operating Line Current: 15A max.
Load Handling: 1875W, continuous
Frequency: 60 Hz
Max. Surge Voltage: 6000V
Clamping Response Time: 1 nsec. (typ.)
Operating Temperature: -13°F to 140°F
Operating Humidity (non-condensing): 0-95%
UL 1449 Rating: 330V
Modes of Protection: H-N, H-G, N-G
Noise Rejection: Transverse and Common
Power Cord: SJT 14/3
Color: Silver housing, black receptacles, end caps, and cord
Visual Surge Indicator Light

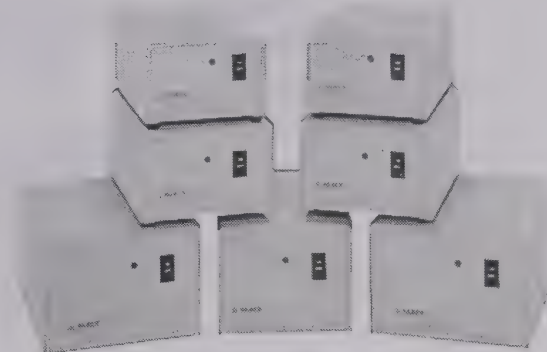
Model No.	Outlets	Cord Length	Circuit Breaker	Noise Filtration Banks				Noise Frequency	Size (In.)	List Price
				1st	2nd	3rd	4th			
PI2-P	2	Plug-In	15A	50 dB	—	—	—	150 KHz-100 MHz	6 3/4" x 3 3/4" x 2 1/4"	\$ 48.00
PI4-P	4	6 ft.	15A	50 dB	75 dB	—	—	150 KHz-100 MHz	9 1/4" x 3 3/4" x 2 1/4"	79.95
PI4-15	4	15 ft.	15A	50 dB	75 dB	—	—	150 KHz-100 MHz	9 1/4" x 3 3/4" x 2 1/4"	84.95
PI6-6	6	6 ft.	15A	50 dB	75 dB	100 dB	—	150 KHz-100 MHz	11 1/4" x 3 3/4" x 2 1/4"	99.95
PI6-15	6	15 ft.	15A	50 dB	75 dB	100 dB	—	150 KHz-100 MHz	11 1/4" x 3 3/4" x 2 1/4"	104.95
PI8-6	8	6 ft.	15A	50 dB	75 dB	100 dB	120 dB	150 KHz-100 MHz	13" x 3 3/4" x 2 1/4"	109.95
PI8-15	8	15 ft.	15A	50 dB	75 dB	100 dB	120 dB	150 KHz-100 MHz	13" x 3 3/4" x 2 1/4"	114.95

**CONSULT OUR STAFF OF
ELECTRONICS EXPERTS ON ALL YOUR SPECIAL
EQUIPMENT OR COMPONENT NEEDS.**

POWER CONDITIONERS

Five of the seven Power Conditioner series feature both undervoltage and overvoltage regulation and range from 300VA to 2400VA. The PC300U and PC600U provide undervoltage regulation only for applications where brownouts are a problem and are also equipped with extra metal oxide varistors for added protection for suppression of current up to 32,500 amps. All models offer superior surge and noise suppression.

- 3 stage surge filter (except 300 and 600U models)
- Max. Surge Current 72.0025A
- Undervoltage units 32.500A
- Max. Energy Dissipation.....890J
- Undervoltage units 350J
- Visual surge Indicator (power indicator only on undervoltage units)
- 2 Year Unlimited Connected Equipment Warranty
- CSA certified (excluding 1800VA/2400VA units)
- UL 1012 listed (excluding 1800VA/2400VA units)



Model No.	Output Rating	Outlets	Overcurrent Protection	Input Voltage (Vrms)	Input Current (A Max.)	Output Current @ 120V (A Max.)	Clamping Resp. Time	Weight (Lbs.)	Size, (In.) (L x W x H)	Price Each
PC300U	300VA	2	4A replaceable fuse	95-126	3.5	2.5	1 nsec.	6.84	8 x 4 x 5 1/4	\$109.00
PC600U	600VA	2	7A circuit breaker	95-126	7	5	1 nsec.	8.84	8 x 4 1/2 x 6 1/4	129.00
PC300	300VA	2	4A replaceable fuse	95-138	3.5	2.5	1 psec.	6.98	8 x 4 x 5 1/4	119.00
PC600	600VA	4	7A circuit breaker	95-138	7	5	1 psec.	8.98	8 x 4 1/2 x 6 1/4	159.00
PC1200	1200VA	4	12A circuit breaker	95-138	12	10	1 psec.	11.70	8 3/4 x 5 1/4 x 6 1/4	249.00
PC1800	1800VA*	6	15A circuit breaker	95-138	15	12.5	1 psec.	15.50	9 x 5 1/2 x 7	339.00
PC2400	2400VA*	6	20A circuit breaker	95-138	20	16.7	1 psec.	18.24	9 x 5 1/2 x 7	399.00

*For units rated at 1800VA and 2400VA; Ratings are limited by 15A and 20A circuit breakers based on maximum current allowed from power receptacle. A dedicated 20A service is required for full operating range for 2400VA model.

VOLTAGE REGULATORS

For applications where premier surge suppression is not necessary. The Voltage Regulator series offers the same power ratings as the Power Conditioner series and provides surge suppression through metal oxide varistors, for protection from surges up to 19,500 amps. All models feature noise filtration.

- Single stage surge filter
- Max. Surge Current 19.500A
- Max. Energy Dissipation.....210J
- Visual Power Indicator
- 2 Year, \$2,500 Connected Equipment Warranty
- CSA certified (excluding 1800VA/2400VA units)
- UL 1012 listed (excluding 1800VA/2400VA units)

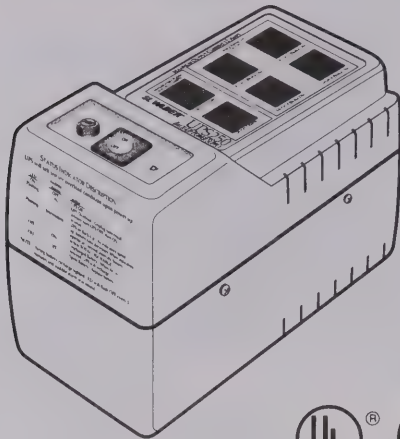


Model No.	Output Rating	Outlets	Overcurrent Protection	Input Voltage (Vrms)	Input Current (A Max.)	Output Current @ 120V (A Max.)	Clamping Resp. Time (nsec.)	Weight (Lbs.)	Size, (In.) (L x W x H)	Price Each
VR300U	300VA	2	4A replaceable fuse	95-126	3.5	2.5	1	6.72	8 x 4 x 5 1/4	\$ 99.00
VR600U	600VA	2	7A circuit breaker	95-126	7	5	1	8.72	8 x 4 1/2 x 6 1/4	119.00
VR300	300VA	2	4A replaceable fuse	95-138	3.5	2.5	1	6.86	8 x 4 x 5 1/4	109.00
VR600	600VA	4	7A circuit breaker	95-138	7	5	1	8.86	8 x 4 1/2 x 6 1/4	139.00
VR1200	1200VA*	4	12A circuit breaker	95-138	12	10	1	11.58	8 3/4 x 5 1/4 x 6 1/4	229.00
VR1800	1800VA*	6	15A circuit breaker	95-138	15	12.5	1	15.38	9 x 5 1/2 x 7	319.00
VR2400	2400VA*	6	20A circuit breaker	95-138	20	16.7	1	18.12	9 x 5 1/2 x 7	379.00

*For units rated at 1800VA and 2400VA; Ratings are limited by 15A and 20A circuit breakers based on maximum current allowed from power receptacle. A dedicated 20A service is required for full operating range for 2400VA model.

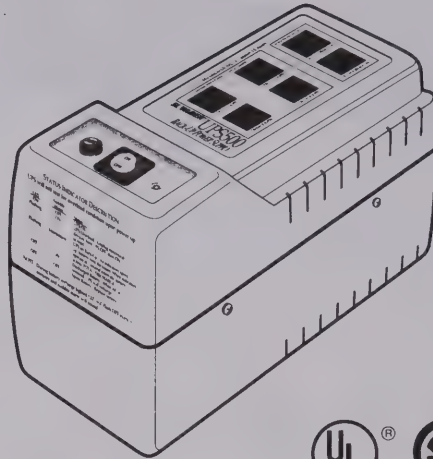
**PRICES SHOWN ARE FOR REFERENCE ONLY. PLEASE CALL
US FOR CURRENT QUOTES.**

UPS250



- Reliable protection against blackouts, brownouts and high line conditions
- Additional surge protected outlets (UL1449)
- Noise filtration
- Precision crafted computer generated wave form and power line tracking
- Automatic self testing of internal circuitry and external loads

UPS500



- User replaceable battery
- Recyclable battery
- Less than 2 hour battery recharge time
- Top entry design
- Lightweight/compact size
- UL, CSA

SPECIFICATIONS FOR UPS250 AND UPS500:

Electrical

Input voltage.....	120V
Input current.....	12A
Input frequency.....	60Hz (± 5%)
Circuit breaker.....	15A
Cord length.....	.6 ft.
Cord type.....	SJT 14/3
Plugs/receptacles.....	NEMA 5-15

UPS Output Ratings

Maximum power capacity	
UPS250.....	250VA, 170W
UPS500.....	500VA, 340W
Max. output current.....	12A
Battery produced waveform.....	true step-sinewave, 170V peak, 120Vrms nominal

Peak voltage regulation	
from no load to full load.....	± 5%
RMS voltage regulation	
from no load to full load.....	± 5%
Load power factor.....	0.5—1.0 limited by maximum power capacity
Load crest factor.....	any - limited by maximum power capacity

Transfer to Battery Back-Up

AC power failure detection time.....	1msec.
Transfer to battery time.....	3msec.
Max. detection and transfer time.....	4msec.
Low voltage detection level.....	95V (± 2%)
transfer back to AC level.....	105V (± 2%)
High voltage detection level.....	137V (± 2%)
transfer back to AC level.....	130V (± 2%)

Battery

Type.....	sealed lead acid battery
Typical life expectancy.....	3-6 years
Battery rating.....	12V, 4AH
Recharge time.....	less than 2 hours
Number of batteries required for operation	
UPS250.....	1
UPS500.....	2

Surge Suppression/Noise Filtration

Maximum surge voltage.....	.6000V
UL1449 rating.....	.400V
Clamping response time.....	1nsec.
Modes of protection.....	H-N, H-G, N-G
Maximum surge current	
H-N.....	.9000A
H-G.....	.9000A
N-G.....	.9000A
	Total 27,000A

Maximum energy dissipation

H-N.....	120J
H-G.....	120J
N-G.....	120J
	Total 360J

Noise attenuation.....	greater than 20dB
Noise frequency.....	over 1MHz
Noise rejection.....	transverse/common

Environmental

Operating temperature.....	0-40°C
Operating humidity (noncondensing).....	0-95%
Operating elevation.....	less than 10,000 feet

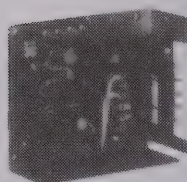
Physical

Dimensions (L × W × H)	
UPS250.....	.9 3/4" × 5 1/4" × 7"
UPS500.....	1 1 3/4" × 5 1/4" × 7"
Weight	
UPS250.....	7 lbs.
UPS500.....	12 lbs.
Model Number UPS250—Price Each.....	\$149.00
Model Number UPS500—Price Each.....	\$299.00

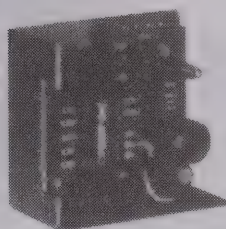
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MAJOR BRANDS. IF YOU CAN'T FIND WHAT YOU WANT,
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INTERNATIONAL SERIES LINEARS SINGLE OUTPUT MODELS

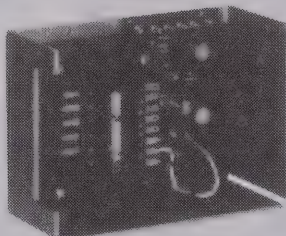
B CASE
4.87" x 4.00" x 2.10"
(123.70 mm) x (101.60 mm) x (53.34 mm)



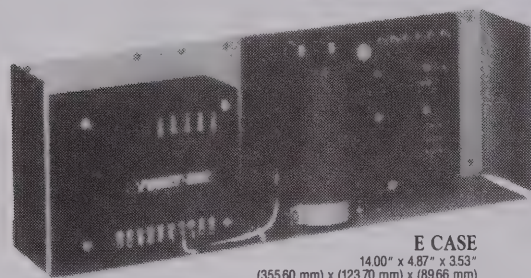
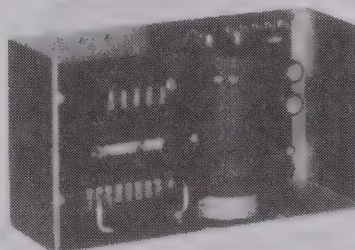
C CASE
5.62" x 4.87" x 2.95"
(142.75 mm) x (123.70 mm) x (74.93 mm)



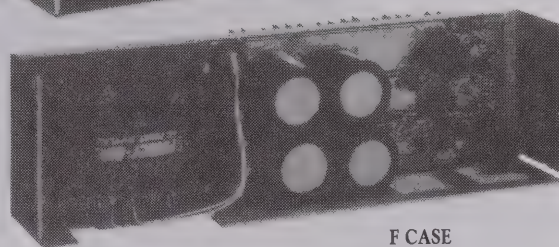
N CASE
7.00" x 4.87" x 3.20"
(177.80 mm) x (123.70 mm) x (81.28 mm)



D CASE
9.00" x 4.87" x 3.28"
(228.60 mm) x (123.70 mm) x (83.31 mm)



E CASE
14.00" x 4.87" x 3.53"
(355.60 mm) x (123.70 mm) x (89.66 mm)



F CASE
16.75" x 4.88" x 5.00"
(425.45 mm) x (123.95 mm) x (127.00 mm)

VOLTAGE	MODEL	VOLTAGE/ CURRENT	CASE SIZE
5V	HA5-1.5/OVP-A*	5V @ 1.5A	B
	HB5-3/OVP-A*	5V @ 3A†	B
	HC5-6/OVP-A*	5V @ 6A†	C
	HN5-9/OVP-A*	5V @ 9A†	N
	HD5-12/OVP-A*	5V @ 12A†	D
	HE5-18/OVP-A*	5V @ 18A†	E
	F5-25/OVP-A*	5V @ 25A†	F
	G5-35/OVP-A*	5V @ 35A†	F
12V	CP197-A*	5V @ 50A†	F
	HA15-0.9-A	12V @ 0.9A	B
	HB12-1.7-A	12V @ 1.7A†	B
	HC12-3.4-A	12V @ 3.4A†	C
	HN12-5.1-A	12V @ 5.1A†	N
	HD12-6.8-A	12V @ 6.8A†	D
	HE12-10.2-A	12V @ 10.2A†	E
	F15-15-A**	12V @ 16A†	F
15V	HA15-0.9-A	15V @ 0.9A	B
	HB15-1.5-A	15V @ 1.5A†	B
	HC15-3-A	15V @ 3A†	C
	HN15-4.5-A	15V @ 4.5A†	N
	HD15-6-A	15V @ 6A†	D
	HE15-9-A	15V @ 9A†	E
	F15-15-A**	15V @ 15A†	F

VOLTAGE	MODEL	VOLTAGE/ CURRENT	CASE SIZE
24V	HA24-0.5-A	24V @ 0.5A	B
	HB24-1.2-A	24V @ 1.2A†	B
	HC24-2.4-A	24V @ 2.4A†	C
	HN24-3.6-A	24V @ 3.6A†	N
	HD24-4.8-A	24V @ 4.8A†	D
	HE24-7.2-A	24V @ 7.2A†	E
	F24-12-A**	24V @ 12A†	F
28V	HA24-0.5-A	28V @ 0.5A	B
	HB28-1-A	28V @ 1A†	B
	HC28-2-A	28V @ 2A†	C
	HN28-3-A	28V @ 3A†	N
	HD28-4-A	28V @ 4A†	D
	HE28-6-A	28V @ 6A†	E
	F24-12-A**	28V @ 10A†	F
48V	HB48-0.5-A	48V @ 0.5A	B
	HC48-1-A	48V @ 1A	C
	HD48-3-A	48V @ 3A†	D
	HE48-4-A	48V @ 4A†	E
120V	HB120-0.2-A	120V @ 0.2A	B
175-210V	HB200-0.12-A	175-210V @ 0.12A	B
250V	HB250-0.1-A	250V @ 0.1A	B

*Overvoltage protection provided. Set at 6.2V ± 0.4V.

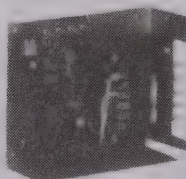
**Adjustable outputs:
F15-15-A: 12-15V
F24-12-A: 24-28V
HA15-0.9-A: 12-15V
HA24-0.5-A: 24-28V

§ Nonadjustable 3 terminal regulator.
x Isolated outputs, can be referenced as + or -
† Remote sense provided.

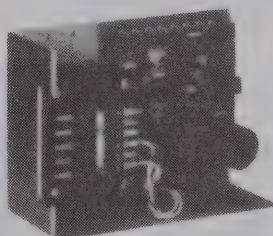
**BE SURE TO WATCH FOR OUR
"POWER SOURCE" BROCHURES.**

INTERNATIONAL SERIES LINEARS

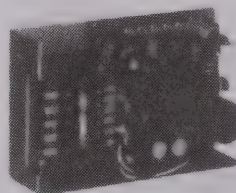
DUAL OUTPUT MODELS



B CASE
4.87" x 4.00" x 2.10"
(123.70 mm) x (101.60 mm) x (53.34 mm)

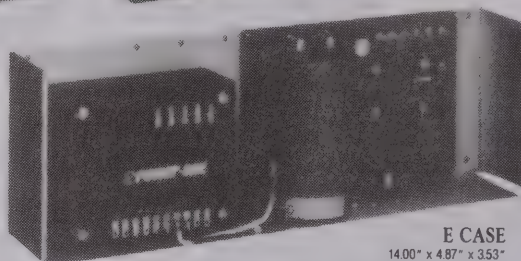
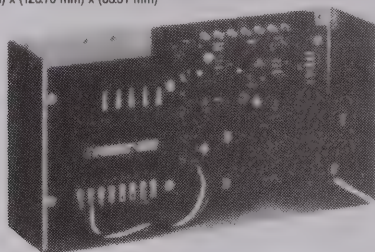


BB CASE
7.00" x 4.88" x 2.95"
(177.80 mm) x (123.95 mm) x (74.93 mm)



AA CASE
6.50" x 4.00" x 2.10"
(165.10 mm) x (101.60 mm) x (53.34 mm)

CC CASE
9.38" x 4.87" x 3.28"
(238.25 mm) x (123.70 mm) x (83.31 mm)



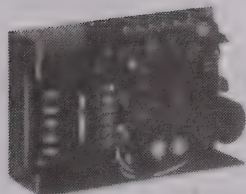
E CASE
14.00" x 4.87" x 3.53"
(355.60 mm) x (123.70 mm) x (89.66 mm)

VOLTAGE	MODEL	OUTPUT #1	OUTPUT #2	CASE SIZE
± 5V	HAA5-1.5/OVP-A	+ 5V @ 1.5A*	- 5V @ 1.5A*	AA
	HBB5-3/OVP-A	+ 5V @ 3A*	- 5V @ 3A*	BB
	HCC5-6/OVP-A	+ 5V @ 6A*†	- 5V @ 6A*†	CC
± 12V	HAD12-0.4-A	+ 12V @ 0.4A§	- 12V @ 0.4A§	B
± 15V	HAD15-0.4-A	+ 15V @ 0.4A§	- 15V @ 0.4A§	B
± 12V to ± 15V	HAA15-0.8-A	+ 12V @ 1A or + 15V @ 0.8A†	- 12V @ 1A or - 15V @ 0.8A or - 5V @ 0.4A†	AA
	HBB15-1.5-A	+ 12V @ 1.7A or + 15V @ 1.5A†	- 12V @ 1.7A or - 15V @ 1.5A or - 5V @ 0.7A†	BB
	HCC15-3-A	+ 12V @ 3.4A or + 15V @ 3A†	- 12V @ 3.4A or - 15V @ 3A†	CC
	HDD15-5-A	+ 12V or 15V @ 5A†	(-)12V or 15V @ 5A†	E
	HAA24-0.6-A	+ 18-20V @ 0.4A or + 24V @ 0.6A	(-)18-20V @ 0.4A or - 24V @ 0.6A	AA
± 18V to ± 24V	HBB24-1.2-A	+ 18-20V @ 0.9A or + 24V @ 1.2A	(-)18-20V @ 0.9A or - 24V @ 1.2A	BB
	HCC24-2.4-A	+ 18-20V @ 1.8A or + 24V @ 2.4A†	(-)18-20V @ 1.8A or - 24V @ 2.4A†	CC
5V and 12V-15V	HAA512-A	5V @ 2A*x	12-15V @ 0.5A	AA
	HBB512-A	5V @ 3A*†x	12-15V @ 1.25A†	BB
	HCC512-A	5V @ 6A*†x	12-15V @ 2.5A†	CC

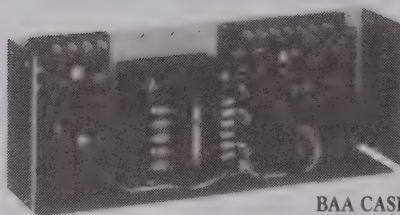
**NEED VALUE-ADDED SERVICES?
CALL US FOR INFORMATION.**

INTERNATIONAL SERIES LINEARS

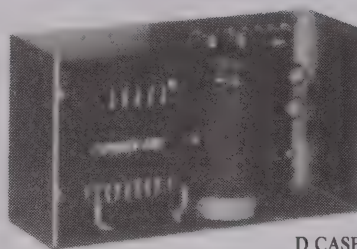
TRIPLE OUTPUT MODELS



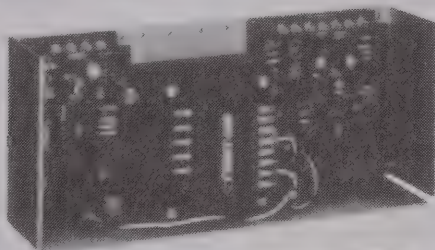
AA CASE
6.50" x 4.00" x 2.10"
(165.10 mm) x (101.60 mm) x (53.34 mm)



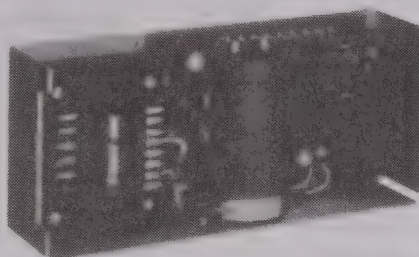
BAA CASE
10.25" x 4.00" x 2.95"
(260.35 mm) x (101.60 mm) x (74.93 mm)



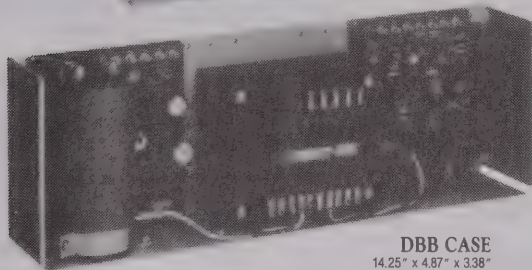
D CASE
9.00" x 4.87" x 3.28"
(228.60 mm) x (123.70 mm) x (83.31 mm)



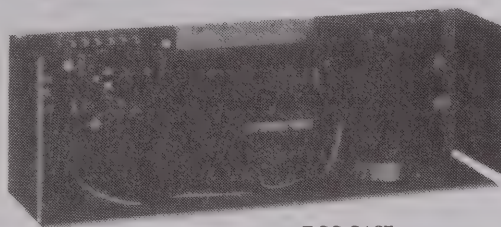
CBB CASE
11.00" x 4.87" x 3.28"
(279.40 mm) x (123.70 mm) x (83.31 mm)



CP131 CASE
11.00" x 4.87" x 3.20"
(279.40 mm) x (123.70 mm) x (81.28 mm)



DBB CASE
14.25" x 4.87" x 3.38"
(361.95 mm) x (123.70 mm) x (85.85 mm)



DCC CASE
15.00" x 4.88" x 4.55"
(381.00 mm) x (123.95 mm) x (115.57 mm)

MODEL	OUTPUT #1	OUTPUT #2	OUTPUT #3	CASE SIZE
HTAA-16W-A	5V @ 2A*x	+ 12 to 15V @ 0.4A	(-) 12 to 15V @ 0.4A or - 5V @ 0.4A	AA
HBAA-40W-A	5V @ 3A*†x	+ 12V @ 1A or + 15V @ 0.8A†	- 12V @ 1A or - 15V @ 0.8A or - 5V @ 0.4A†	BAA
HCAA-60W-A	+ 5V @ 6A*†	+ 12 to 15V @ 1A	(-) 12 to 15V @ 1A or - 5V @ 0.4A	D
HCBB-75W-A	5V @ 6A*†x	+ 12V @ 1.7A or + 15V @ 1.5A†	- 12V @ 1.7A or - 15V @ 1.5A or - 5V @ 0.7A†	CBB
CP131-A	5V @ 8A*†x	+ 12V @ 1.7A or + 15V @ 1.5A†	- 12V @ 1.7A or - 15V @ 1.5A or - 5V @ 0.7A†	131
HDBB-105W-A	5V @ 12A*†x	+ 12V @ 1.7A or + 15V @ 1.5A†	- 12V @ 1.7A or - 15V @ 1.5A or - 5V @ 0.7A†	DBB
HDCC-150W-A	5V @ 12A*†x	+ 12V @ 3.4A or + 15V @ 3A†	- 12V @ 3.4A or - 15V @ 3A†	DCC

* Overvoltage protection provided. Set at 6.2V ± 0.4V.

† Remote sense provided.

x Isolated outputs, can be referenced as + or -

§ Nonadjustable 3 terminal regulator.

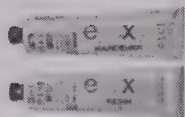
☆ Adjustable 3 terminal regulator.

• Can be made into an isolated output by removing jumper W1

**WE ARE BETTER ABLE TO SERVICE YOUR NEEDS BY
BELONGING TO EDPA, A NATIONAL BUYING GROUP.**

CEMENTS

EPOXY GLUE



Super grip, fast set glue is specified by NASA for use in space program. Resists acids, alkali, grease, gas, water, etc. Mix from two

tubes in equal parts, hardens in 5 min. under 150°F heat lamp. Kit of 2 tubes, approx. 2 oz. each.

GC No. 10-347—Price Each Kit **\$17.49**

GR-R

World famous alpha cyanoacrylate rapid bonding adhesive. Bond strength not affected by temperatures from -112°F to +212° (-80°C to +100°C).

GC No. 10-115—3 oz. tube.

Price Each **\$4.49**

RADIO SERVICE CEMENT

The best cement for repairing radios and torn speaker cones or replacing torn cones. Vibrationproof, waterproof and fast drying. Non-shrinking. Use also on plastic, metal, wood, etc. Carded.

GC No. 10-302—2-oz. Price Each **\$4.59**

GC No. 10-304—4-oz. Price Each **\$5.89**

GC No. 10-303—2-oz. Carded. Price Each **\$4.89**

PLASTIC CEMENT

For broken plastic cabinets, knobs, dials, and crystal assemblies, grille cloth, etc.

GC No. 10-324—2-oz. Price Each **\$4.59**

RUBBER-TO-METAL CEMENT

For cementing dial drives, rubber mountings, gaskets, hose, weather stripping, etc.

GC No. 10-352—2-oz. Price Each **\$4.59**

BOND

A cold-setting rubber-like, thermoplastic liquid that dries rapidly to a waterproof, chemically-resistant bond with permanent flexibility and very high strength. Glues all material.

GC No. 10-4302—2-oz. Price Each **\$5.39**

ACRYLIC CEMENT

For Lucite®, plexiglass, and acrylic materials. Strong, fast drying.

GC No. 10-4002—2-oz. Price Each **\$4.19**

"VINYLITE" CEMENT

Thermoplastic cement. Clear plastic cement for use in metals, plastics, paper, leather, etc. Sets on cooling.

GC No. 10-5802—2-oz. Price Each **\$5.09**

AEROSOL CHEMICALS



K-27 PRINT-KOTE

TV silicone resin for printed circuits. 6 oz.

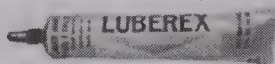
GC No. 22-204—Clear, Price Each **\$6.99**

DE-OX-ID®

Electrical contact cleaner for silver, detent, and radar contacts.

GC No. 10-1906—6 oz. Price Each **\$7.59**

LUBRICANTS



LUBREX

Reduces noise by preventing corrosion and prolongs life. Excellent for lubricating bearings, gears, etc.

GC No. 10-1206—2-oz. tube.

Price Each **\$4.39**

PRESSURIZED LUBRICATING OIL

Ideal for hard to reach trouble spots. Will shoot oil up to six feet. Lubricates moving machinery, gears, etc.

GC No. 10-916—5-oz. aerosol.

Price Each **\$5.29**

REACH-ALL PEN OILER

Fine electronic oil for radio and TV servicing. Oil meets MIL-L-6085A specs. Tube extends and retracts; dispenses a drop or fraction. Best suited for gears, guns, fishing reels, etc. ½ oz.

GC No. 10-984—Pen oiler. Price Each . **\$5.29**

SILI SPRAY

High quality silicone lubricant. Applies light lubricant film that lasts and lasts, won't leave residue build-up. Can be used in home, office, or workshop.

GC No. 10-600—6-oz. aerosol.

Price Each **\$11.59**

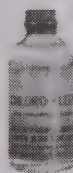
FORMULA 70

Special ingredients remove moisture, deposit a thin lubricating film preventing further oxidation.

GC No. 10-700—12-oz. aerosol.

Price Each **\$5.69**

CLEANERS



CHLORO-KLEEN

Non-toxic powerful solvent quickly dissolves grease, dirt, oils, tar and waxes. Contains Chlorothene®.

GC No. 10-2139—1-gal. Price Each ... **\$48.29**

AUDIO-VIDEO MAGNETIC TAPE HEAD CLEANER

Removes dirt and oxide buildup, won't harm tape or paint finish. May be used on running tape. Comes with 6" spray extension.

GC No. 10-620—16-oz. spray can.

Price Each **\$23.39**

ELECTRONIC DRY CLEANER

A "dry" cleaner for use on contacts, relays and other electronic devices where residual, oily deposits are undesirable. Also an excellent degreaser and a general solvent for inks and gummy deposits on electrical or mechanical devices, such as typewriters, presses, etc. Non-flammable; does not contain carbon tet.

GC No. 10-8669—16-oz. Price Each **\$8.89**

DOPES, INSULATING LIQUIDS



LIQUID TAPE

For hard-to-get-at places for high voltage insulation. Use also for anti-rust coating, weatherproofing, etc.

GC No. 10-1762—2-oz. bottle.

Price Each **\$5.99**

GC No. 10-1766—16-oz. bottle.

Price Each **\$29.09**

Q-DOPE

Liquid polystyrene low-loss coil dope for RF, UHF, and VHF components. Will not change circuit values. Also a polystyrene cement.

GC No. 10-3702—2-oz. Price Each **\$4.19**

TV TUBE KOAT

Fast-drying conductive coating for recoating the outside of TV picture tubes that are scratched or peeling. Also used to coat the inside of TV cabinets for prevention of high voltage leaks and static discharge. Ideal for coating at points where ground clips contact tube.

GC No. 10-4912—12¼ oz. spray can.

Price Each **\$8.19**

TV HIGH VOLTAGE CORONA DOPE

For preventing corona shorts in high voltage circuits in TV sets. Easy to apply, air drying. Use on any high voltage circuit.

GC No. 10-5002—2-oz. Price Each **\$7.39**

RED GIPT INSULATING VARNISH

Most common coating for solder connections, anti-corona and high voltage points. Heat resistant to 300°F.

GC No. 10-9002—2-oz. Price Each **\$5.69**

SOLVENTS AND THINNERS



STRIP-X

Strips enamel from magnet wire. Just dip wire and wipe off insulation—cleaned, ready for soldering.

GC No. 10-2602—2-oz. Price Each **\$11.59**

RADIO SERVICE SOLVENT

Best thinner for all cements—dissolves cement off old cones and speakers.

GC No. 10-312—2-oz. Price Each **\$3.39**

GC No. 10-318—8-oz. Price Each **\$6.19**

Q-DOPE THINNER

Solvent for Q-Dope and polystyrene materials. Clear water white solvent.

GC No. 10-4102—2-oz. Price Each **\$3.79**

KESTER "44" ROSIN CORE SOLDER



Fast-acting and instant wetting design allows for faster soldering. The non-corrosive, non-conductive flux is ideal where a strong, long-lasting bond is needed. Available in any size ranging from .005" to .250". Also available for Fed. Spec. QQ-S-571d. Two standard put-ups: 1-lb. and 5-lb. spools; 20 lb. spools available on special order.

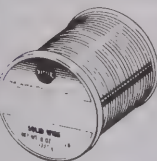
Mfr. No.	Alloy	Unit Spool	Dia.	Ga.	Price Per Lb.
24-4060-0061	40/60	1&5 lb.	.062	16	\$ 8.42
24-4060-0066	40/60	1&5 lb.	.093	16	8.00
24-6040-0018	60/40	1&5 lb.	.025	25	13.92
24-6040-0027	60/40	1&5 lb.	.031	21	11.50
24-6040-0039	60/40	1&5 lb.	.040	19	11.00
24-6040-0053	60/40	1&5 lb.	.050	18	10.58
24-6040-0061	60/40	1&5 lb.	.062	16	9.92
24-6040-0066	60/40	1&5 lb.	.093	13	9.50
24-6337-0010	63/37	1&5 lb.	.020	25	16.62
24-6337-0027	63/37	1&5 lb.	.031	21	11.88
24-6337-0039	63/37	1&5 lb.	.040	19	11.17
24-6337-0061	63/37	1&5 lb.	.062	16	10.02

285 MILDLY ACTIVATED ROSIN CORE SOLDER

Conforms to Type RMA of Fed Spec QQ-SS-571 and is on the qualified products list. "285" has high mobility and fast spreading action.

Mfr. No.	Alloy	Unit Spool	Dia (In.)	Gauge	Price Per Lb.
24-6337-9700	63/37	1 & 5 lb.	.020	25	\$16.62
24-6337-9713	63/37	1 & 5 lb.	.031	21	11.88

KESTER SOLID WIRE SOLDER



Equal to Kester "44" in consistency and use. Standard put-ups are 1-lb. and 5-lb. spools; 20-lb. spools and 50-lb. reels also available.

Mfr. No.	Alloy	Unit Spool	Dia.	Ga.	Price Per Lb.
14-4060-0125	40/60	1 lb.	.125	11	\$8.00
14-5050-0125	50/50	1 lb.	.125	11	8.74
14-6040-0125	60/40	1 lb.	.125	11	9.50

LEAD FREE WIRE SOLDER

Mfr. No.	Alloy	Unit Spool	Dia (In.)	Gauge	Price Per Lb.
14-7016-0125	98/2AG	1 lb.	.125	11	\$17.18
14-7080-1001	95/5SB	1 lb.	.093	13	13.60
24-7050-2437	Aquabond Acid Flux	1 lb.	.093	11	13.96
14-0000-8053	Aquabond	1 lb.	.093	13	13.96

331 WATER SOLUBLE CORE SOLDER

More effective than rosin fluxes in soldering difficult metals. Residue can be completely removed with simple water rinse.

Mfr. No.	Alloy	Unit Spool	Dia (In.)	Gauge	Price Per Lb.
24-6337-6401	63/37	1 & 5 lb.	.020	25	\$16.62
24-6337-6403	63/37	1 & 5 lb.	.031	21	11.88

245 NO CLEAN FLUX CORE SOLDER

Leaves a low amount of residue which is both visually negligible and electrically safe. Does not require cleaning, is environmentally safe, and needs no CFC solvents.

Mfr. No.	Alloy	Unit Spool	Dia (In.)	Gauge	Price Per Lb.
24-6337-8807	63/37	1 & 5 lb.	.020	25	\$16.62
24-6337-8800	63/37	1 & 5 lb.	.031	21	11.88

KESTER ACID WIRE SOLDER

The Original Acid-Core Solder, Kester Acid-Core Solder meets all the requirements of "general soldering work." Provides the maximum efficiency—the least labor and material costs. Do not use on electrical work.

Mfr. No.	Alloy	Unit Spool	Dia.	Ga.	Price Per Lb.
24-4060-2437	40/60	1 lb.	.125	11	\$ 8.00
24-7050-2437	Aquabond Lead Free	1 lb.	.125	11	13.96

KESTER BAR SOLDER



Available in all the tin-lead alloys. Uniform distribution of tin lead alloys provides for more efficient and easy application.

Mfr. No.	Composition	Bar Weight	Price Per Lb.
04-3070-0000	30% tin, 70% lead	1 lb.	\$4.64
04-4060-0000	40% tin, 60% lead	1 lb.	5.46
04-5050-0000	50% tin, 50% lead	1 lb.	6.28
04-6040-0000	60% tin, 40% lead	1 lb.	7.10
04-6337-0000	63% tin 37% lead	1 lb.	7.36

FLUX PENS



Kester Flux Pen is a unique tool for rework and touch-up soldering. It allows controlled application of flux, eliminating the mess from flux bottles. The chisel point allows for work in very confined spaces. The flux pen is ideally suited for tab assembly no-clean and surface mount rework application because it can deliver flux to a specific area.

Mfr. No.	Description	Volume (Oz.)	Price Each
83-1000-0186	Formula #186 RMA Flux	.33	\$3.48
83-1000-0951	Formula #951 No Clean	.33	3.48
83-1002-0450	Formula #450 Organic Acid Water Soluble Flux	.33	3.48

POCKET PAK & KWIK DRAW



Handy, clear, plastic pocket size solder dispenser.

Mfr. No.	Description	Alloy	Dia.	Volume (oz.)	Price Each
83-4000-0000	Pocket Pak	60/40	.031	1/2	\$1.20
83-3000-0000	Kwik Draw	60/40	.050	1.3	1.72

KESTER SOLDER PASTE

Pre-alloyed solder with a no-clean or water soluble flux for either syringe or stenciling application.

Mfr. No.	Alloy	Description	Net Wt. (Grams)	Price Each
58-3201-5109	63/37 -325 + 500 Mesh 90% Metals	NC-830 RMA No Clean Paste Jar	500	\$117.60
58-3001-5201	63/37 -325 + 500 Mesh 86% Metals	NC-840 RMA NO Clean Paste Syringe	25	15.60
58-3201-5309	63/37 -325 + 500 Mesh 90% Metals	WS-850 Water Soluble Paste Jar	500	117.60
58-3001-5201	63/37 -325 + 500 Mesh 86% Metals	WS-860 Water Soluble Paste Syringe	25	15.60

STANDARD FLUXES, THINNERS, AND CLEANERS



RMA FLUXES

186 RMA Mildly Activated Rosin Flux—is Kester's standard mil-approved rosin flux for electronics. It can be applied by dip, wave, foam, and other methods. Available in quart and 1 gallon units.

Mfr. No. 63-0000-0186—1 gallon. Price Each **\$42.80**
Mfr. No. 62-0000-0186—1 quart. Price Each **\$17.20**

120 Thinner—is a mixture of alcohols used to replace lost solvent in 186 liquid flux. Solvent is commonly lost when liquid flux is applied by foaming or waving. Available in quart and 1 gallon units.

Mfr. No. 63-0000-0120—1 gallon. Price Each **\$23.60**
Mfr. No. 62-0000-0120—1 quart. Price Each **\$9.40**

RA FLUXES

1515 RA 15% Solids Activated Rosin Flux—was developed for wave soldering of consumer or non-critical electronic assemblies. It can also be used for other general applications. Even though 1515 is a fully activated flux many customers do remove the residue after cleaning. Available in quart and 1 gallon units.

Mfr. No. 63-0000-1515—1 gallon. Price Each **\$31.00**
Mfr. No. 62-0000-1515—1 quart. Price Each **\$12.40**

Formula 4662 Thinner—is a mixture of alcohols used to replace lost solvent in Kester formulas 1515, 2224-25, and 2331-ZX. Available in quart and 1 gallon units.

Mfr. No. 63-0000-4662—1 gallon. Price Each **\$22.60**
Mfr. No. 62-0000-4662—1 quart. Price Each **\$9.00**

1544 RA 50% Solids Activated Rosin Flux—is the liquid version of Kester 44 resin. The high solids content gives it good heat stability for dipping and hand applications. Available in quart and 1 gallon units.

Mfr. No. 63-0000-1544—1 gallon. Price Each **\$35.00**
Mfr. No. 62-0000-1544—1 quart. Price Each **\$14.00**

104 Thinner for 1544—Available in quart and 1 gallon units.

Mfr. No. 63-0000-0104—1 gallon. Price Each **\$29.80**
Mfr. No. 62-0000-0104—1 quart. Price Each **\$12.00**

WATER SOLUBLE FLUXES

1429 Water Soluble All Purpose Flux—has been one of Kester's standard water washable materials for a long time. It is capable of soldering to most metals including some mild steels, but is not generally used for wave soldering. Available in quart and 1 gallon units.

Mfr. No. 63-0000-1429—1 gallon. Price Each **\$32.40**
Mfr. No. 62-0000-1429—1 quart. Price Each **\$13.00**

2224-25 Organic Acid Water Soluble Flux—is Kester's strongest flux for wave soldering. It is consumer and other applications where component and board quality are difficult to control. Available in quart and 1 gallon units.

Mfr. No. 63-0025-2224—1 gallon. Price Each **\$34.40**
Mfr. No. 62-0025-2224—1 quart. Price Each **\$13.80**

2331-ZX Neutral pH Water Soluble Flux—is relatively mild and safe water soluble flux used for electronic assembly. The residues left after soldering are still conductive, however, and must be removed in most applications. Available in quart and 1 gallon units.

Mfr. No. 63-0097-2331—1 gallon. Price Each **\$38.00**
Mfr. No. 62-0097-2331—1 quart. Price Each **\$15.20**

HF-1189 VOC (Volatile Organic Compound) Free Water Soluble Flux—is a water based, halide (chloride) free liquid flux that combines moderate activity with environmental friendliness. It contains no alcohols which are photochemically reactive and been linked to global warming. The residue left after soldering must be cleaned off with water. Available in quart and 1 gallon units.

Mfr. No. 63-0000-1189—1 gallon. Price Each **\$80.40**
Mfr. No. 62-0000-1189—1 quart. Price Each **\$32.00**

LOW SOLIDS, NO CLEAN FLUXES

951, 2% Low Solids No-Clean Flux—is Kester's best selling Low solids flux. It combines good activity with no visible residue after wave soldering. The low solids content helps to eliminate defects when soldering bottom side surface mount components, but overall board and component solderability must be good for best results. #951 can be foamed, waved or sprayed and also comes in a flux pen. Available in quart and 1 gallon units.

Mfr. No. 63-0000-0951—1 gallon. Price Each **\$34.00**
Mfr. No. 62-0000-0951—1 quart. Price Each **\$14.00**

110 Thinner—contains a mixture of alcohols used to replace solvents lost when using #951 liquid flux. Available in quart and 1 gallon units.

Mfr. No. 63-0000-0951—1 gallon. Price Each **\$24.60**
Mfr. No. 62-0000-0951—1 quart. Price Each **\$10.20**

#961, 3% Low Solids No-Clean Flux—is a higher activity version of Kester #951 which has better solderability, but leaves behind a little more residue. It is recommended when component solderability or boards design require a flux which is slightly more active than #951. Available in quart and 1 gallon units.

Mfr. No. 63-0000-0961—1 gallon. Price Each **\$36.00**
Mfr. No. 62-0000-0961—1 quart. Price Each **\$14.40**

#111-B Thinner—contains a mixture of alcohols which are used to replace solvents lost when using Kester #961 liquid flux. Available in quart and 1 gallon units.

Mfr. No. 63-0002-0111—1 gallon. Price Each **\$25.60**
Mfr. No. 62-0002-0111—1 quart. Price Each **\$10.20**

#970 VOC (Volatile Organic Compound) Free No-Clean Flux—is the way that all liquid fluxes will eventually evolve. It combines environmental friendliness with cost effective no-clean technology. It is a water based, halide free liquid flux that can be applied by dip, spray, wave or foam. Although thinning is not normally required, ordinary deionized water can be used. Kester has applied for a patent to protect the technology. Available in quart and 1 gallon units.

Mfr. No. 63-0000-0970—1 gallon. Price Each **\$62.20**
Mfr. No. 62-0000-0970—1 quart. Price Each **\$12.40**

CHEMICALS

#AP-20 Residue Remover—is and ODP (Ozone Depletion Potential) Free solvent base on perchlorethylene, the solvent used by dry cleaning establishments. For some customers who must clean with solvents it is seen as a short term solution. Available in quart and 1 gallon units.

Mfr. No. 63-0000-0020—1 gallon. Price Each **\$44.60**
Mfr. No. 62-0000-0020—1 quart. Price Each **\$16.80**

#5768 Bio-Clean Saponifier—Saponifiers turn rosin residue into a water soluble soap. #5768 is used as an alternative to ozone depleting chemicals used to remove rosin flux residues. A 4% to 10% solution is made with water and then followed by a water rinse. Available in quart and 1 gallon units.

Mfr. No. 63-0000-5768—1 gallon. Price Each **\$47.40**
Mfr. No. 62-0000-5768—1 quart. Price Each **\$19.00**

**WE CARRY MOST MAJOR BRANDS.
 IF YOU CAN'T FIND WHAT YOU
 WANT, CALL US FOR INFORMATION.**

ADHESIVES, CLEANERS & COATINGS

3M SUPER 77 SPRAY ADHESIVE

A high tack, fast drying, transparent adhesive to permanently attach foils, foams, paper, etc. to painted or unpainted metals or other base materials. Contains no Meth Chloride, 1.1.1-Trichlor or CFC'S.

PART NUMBER	DESCRIPTION
SUPER 77	SPRAY ADHESIVE, 24 OZ

SCOTCH BRAND 5-WAY PENETRANT

A multi-purpose penetrant that displaces moisture to help prevent shorting, increase conductivity and inhibit rust and corrosion by penetrating the pores of the surface. Harmless to paint, plastics, and rubber. Contains no Meth Chloride, 1.1.1-Trichlor or CFC'S.

5-WAY 24 OZ	PENETRANT CLEANER, 24 OZ SPRAY
5-WAY 6 OZ	PENETRANT CLEANER, 6 OZ SPRAY

3M BRAND INDUSTRIAL CLEANER

An aerosol cleaner which will dissolve and flush away dirt, grease, tar, most non-curing adhesives and similar substances. Citrus oil based cleaner that emulsifies when flushed with water and contains no petroleum distillates. Contains no Meth Chloride, 1.1.1-Trichlor or CFC'S.

INDUST CLEAN	CITRUS BASED CLEANER, 24 OZ AEROSOL
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STATIC CONTROL SURFACE CLEANER

An extra strength cleaner for removing dirt from all types of static control surfaces from benchtops to floormats or field service kits. Used full strength, it is a clear, water based liquid which leaves no tacky residue. It is safe for use in clean rooms.

8001	STATIC CONTROL SURFACE CLEANER, 1 QT
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PRONTO INSTANT ADHESIVES

One-component, high-strength, very fast setting, multi-purpose cyanoacrylate adhesive that cures at room temperature with very low pressure. Only a few drops are needed to develop strong bonds to metals, plastics, and rubber. Meets MIL-A-46050c, Type II, Class 2.

CA-4	PRONTO, MED SET, 1 OZ BOTTLE
CA-5	PRONTO, SLOW SET, 1 OZ BOTTLE
CA-7	PRONTO, FAST SET, 1 OZ BOTTLE
CA-40	PRONTO, FAST SET, 10 OZ BOTTLE

SCOTCH-WELD EPOXY AND APPLICATOR

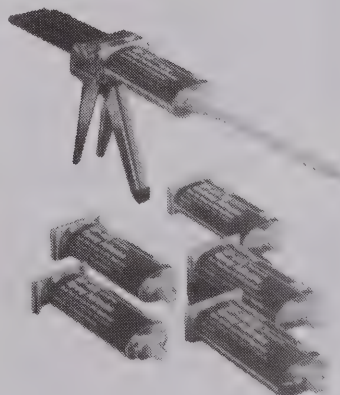
Very clear, fast setting, room temperature curing, two-part adhesive bonds metals, ceramics, wood and many plastics in approximately 5 minutes. Low viscosity allows easy pouring and is ideal for filleting and potting. Meets corrosion requirements of MIL-S-46163.

DP-100 CLEAR	GENERAL PURPOSE, 1.7 OZ DUO PAK
DP-190 GRAY	GENERAL PURPOSE, 1.7 OZ DUO PAK
DP-270 CLEAR	ELECTRONIC TYPE, 1.7 OZ DUO PAK
DP-270-BLACK	ELECTRONIC TYPE, 1.7 OZ DUO PAK
EPX-APPLICATOR	APPLICATOR WITH PLUNGER ASSY

SCOTCHKOTE ELECTRICAL COATING

Provides a tough, oil resistant outer seal on electrical insulation. Use for splices on underwater cables or in high moisture applications.

SCOTCHKOTE	ELECTRICAL COATING, 15 OZ CAN
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CALL US FOR A FREE 3M CATALOG.

CIRCUIT REFRIGERANT



Chills circuit tracings and parts more quickly with less spray than the older, CFC-based products. This product is an inert, high-purity freezing agent which cools instantly, vaporizes completely, is nonflammable, non-conductive, and does not leave residual film.

ECG No. OZ100-12 Aerosol—12 oz.
Price Each.....\$6.10
ECG No. OZ100-16 Aerosol—16 oz.
Price Each.....\$9.40

ANTI-STATIC CIRCUIT REFRIGERANT



A high-purity anti-static freezing agent which chills static-sensitive parts instantly to -70°F to -100°F using less product than the older, CFC-based products. It helps to protect parts from damage caused by electrostatic charge. The product vaporizes completely, is nonflammable, nonconductive and does not leave residual film.

ECG No. OZ110-12 Aerosol—12 oz.
Price Each.....\$6.80

ELECTRONIC PRODUCTS DEGREASER AND WASH



A blend of HCFCs and isopropyl alcohol which quickly and safely removes dirt, grease, oils and polar soils from a broad range of electronic components, PC boards, and electrical parts and equipment. It is safe to use on most plastics, paints and polymers and is nonflammable.

ECG No. OZ200-24 Aerosol—24 oz.
Price Each.....\$10.40

ALL-PURPOSE DEGREASER & WASH



An Improved formulation based on HCFCs and isopropanol effective in removing both organic and ionic soils. Quickly flushes away dirt, grease, oxidation and particulates. With excellent wetting and dielectric properties, it leaves no residue, is non-flammable and safe for use on most plastics, metals and paints.

ECG No. OZ300-24 Aerosol—24 oz.
Price Each.....\$10.60

CONTACT CLEANER



A fast-acting cleaner for use on all kinds of contacts and controls. It reduces noise and arcing caused by oxidation and dirt on contacts, which prevent good electrical continuity. This product has excellent dielectric properties, will not detune RF circuitry, is nonflammable and can safely be used on most plastics as well as painted and plated surfaces.

ECG No. OZ400-8 Aerosol—8 oz.
Price Each.....\$5.50
ECG No. OZ400-24 Aerosol—24 oz.
Price Each.....\$10.30

CONTACT CLEANER WITH LUBE



A fast-acting cleaner and lubricant for use on all types of contacts and controls. It reduces noise and arcing caused by dirt and oxidation on contacts, restores good electrical continuity and protects against further oxidation. The product will not detune RF circuitry, evaporates quickly, leaves no residue and can safely be used on most plastics as well as painted and plated surfaces.

ECG No. OZ500-16 Aerosol—16 oz.
Price Each.....\$8.10

**PRICES SHOWN ARE FOR
REFERENCE ONLY. PLEASE CALL US
FOR CURRENT QUOTES.**

HEAVY DUTY FLUX REMOVER



A stronger solvent that quickly removes most organic fluxes, rosin, oils and ionic contaminants. It leaves no white residue and is also an effective metal degreaser. Safe to use on most metals and plastic.

ECG No. OZ600-20 Aerosol—20 oz.
Price Each.....\$7.90

ALL PURPOSE FLUX REMOVER



A general duty defluxer that safely removes all kinds of activated rosin flux, oils and contaminants from electronic and electrical circuits, parts and assemblies. It is safe to use on most plastics and does not leave a residue.

ECG No. OZ700-24 Aerosol—24 oz.
Price Each.....\$8.20

COMPUTER/TUNER CLEANER



Effectively removes oils, dirt, oxidation, smoke deposits, grease and ionic soils from computer tape transports, mechanical television tuners, contacts, parts, printed circuit boards and other electronic/electrical assemblies. It reduces noise and frequency drift by restoring good electrical continuity. The cleaner can be safely used on most plastics, will not detune tuners, evaporates quickly leaving no residue, and is nonflammable.

ECG No. OZ800-8 Aerosol—8 oz.
Price Each.....\$6.60
ECG No. OZ800-24 Aerosol—24 oz.
Price Each.....\$11.20

TUNER CLEANER AND LUBRICANT

Cleans and lubricates all mechanical tuners, leaving a light coating of lubricant that provides long lasting protection against oxidation and attendant noise. Can safely be used on most plastic and metal surfaces.

ECG No. OZ900-8 Aerosol—8 oz.
Price Each.....\$6.60
ECG No. OZ900-16 Aerosol—16 oz.
Price Each.....\$9.20

ALL PURPOSE LUBRICANT

Coats and protects all kinds of indoor and outdoor metal equipment against rust and corrosion. Provides long lasting protection, is easy to apply, and will not stain. Displaces water and restores dielectric properties. It lubricates and eases disassembly of frozen parts. Can be easily removed with OZ200 Degreaser. Withstands temperature extremes ranging from -40°F to +500°F. Efficiently resists bacterial action, salt, moisture, and acids.

ECG No. OZ1000-11 Aerosol—11 oz. Price Each.....\$5.40

JET AIR CLEANER

Quickly and safely removes dust, lint, oxide particles, and other dry, particulate matter from the most delicate equipment and hard-to-reach places.

ECG No. OZ1100-12 Aerosol—12 oz. Price Each.....\$6.90

HEAVY DUTY CLEANING SOLVENT

A strong cleaning and degreasing agent effective in removing contaminants from a broad range of equipment and parts. The product leaves no residue, is nonflammable, and is safe to use on most metals and plastics.

ECG No. OZ1400-22 Aerosol—22 oz. Price Each.....\$7.95

TAPE/DISK HEAD CLEANER

A non-conductive solvent that leaves no residue and is safe for use on most metals, plastics, tapes, rubber and elastomers. It effectively removes oils, oxides, particulates, ionic soils and other contaminants from capstans, rollers, guides and tape transport mechanisms. Reduces head wear, prolongs tape life, protects data.

ECG No. OZ1600-23 Aerosol—23 oz. Price Each.....\$11.30

COMPUTER GLASS AND ENCLOSURE CLEANER

Efficiently cleans and polishes glass and plastic displays. CRTs, terminals, work stations, monitors as well as plastic enclosures and cases of all tapes. Also dissipates and helps protect against static buildup. Will not harm other materials, fabrics or parts. Non-staining, non-scratching, non-streaking and fast drying.

ECG No. OZ1800-14—14 oz. Price Each.....\$5.70

TECHCLEAN™ CARD



A one-time use, pre-saturated card to remove dirt, magnetic oxides and other contaminants from magnetic or photo card reading apparatus. **Applications:** Credit card readers, ATMs/POS terminals, petroleum card readers, credit vending machines, time/badge readers, telephone card readers, slot machines, door slots and security access

Number	Description	Price Each ■
1603-50PK	50 Pre-Saturated Cards Per Carton	\$56.45

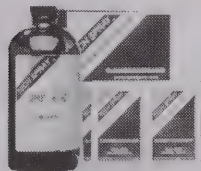
KLEEN-ALL™



Used to penetrate and dissolve non-polar soils such as oil, grease, wax, tar, adhesive and rosin. Contains 1,1,1 Trichloroethane. Not safe on some plastics. Vapor concentrates in low, unventilated spaces. **Applications:** Contacts and controls, PCBs, motors, generators, switches, industrial machinery, gears, electromechanical devices and automated office equipment.

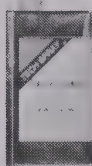
Number	Description	Price Each ■
1604-12S	12 Ounce Aerosol	\$ 6.69
1604-22S	22 Ounce Aerosol	8.85
1604-P	1 Pint in Shatterproof Glass	13.83
1604-G	1 Gallon in Glass	48.64
1604-5G	5 Gallons in Metal	204.84
1604-54G	54 Gallons in Metal	★

ISOPROPYL ALCOHOL



99% pure, anhydrous isopropanol for all purpose cleaning. Dissolves a majority of soils found in the electronics workplace. Water free to prevent corrosion; safe on most plastics. **Applications:** Tape head cleaning, printed circuit boards, connectors, microwave and telephone circuitry, data processing equipment, photocopying equipment, medical equipment, relays and flux thinner.

Number	Description	Price Each ■
1610-50PK	50 Pre-Saturated Packets Per Carton	\$13.67
1610-P	1 Pint in Shatterproof Glass	9.75
1610-G	1 Gallon in Plastic	19.84
1610-5G	5 Gallons in Plastic	76.47
1610-54G	54 Gallons in Plastic	★

ENVI-RO-TECH™
FINE-L-KOTE™ REMOVER

Removes most conformal coatings including acrylic, epoxy, urethane and some silicones. Contains no methylene chloride. **Applications:** Conformally coated circuit boards, painted or varnished items and any application where coating removal is necessary.

Number	Description	Price Each ■
1618-P	1 Pint in Metal	\$ 16.87
1618-G	1 Gallon in Metal	90.50
1618-5G	5 Gallons in Metal	393.56
1618-54G	54 Gallons in Metal	★

ENVI-RO-TECH™ 1679



An alcohol-based general duty defluxer for RA, RMA, and SA type fluxes. Can be used as an all purpose cleaner to remove light oils, silicones, waxes, greases, and similar contaminants often found in electronics manufacturing. No CFC's, HCFC's or HFC's. **Applications:** Printed circuit boards, gold fingers, connectors, microwave and telephone circuitry, avionics, relays, switches, other electronic assemblies.

Number	Description	Price Each
1679-N	1 Pen Containing 10ml of Solvent	\$ 4.22
1679-2FP	2 Ounce Finger Pump in Anti-Static Plastic Bottle	5.87
1679-PT	1 Pint with Trigger in Anti-Static Plastic Bottle	7.52
1679-P	1 Pint in Shatterproof Glass	9.52
1679-G	1 Gallon in Glass	76.20
1679-5G	5 Gallons in Metal	109.17
1679-54G	54 Gallons in Metal	★

ENVI-RO-TECH™ 1672



An HFC-134a based, rapidly evaporating liquid that chills to minus 62°F. Because HFCs do not harm the ozone, this product has a zero ozone depletion factor. Used as a trouble shooting aid for intermittently faulting capacitors, resistors, semi-conductors, and other defective components, this tool speeds up the rework process. Also detects cold solder joints, cracks in printed circuit boards, and oxidized junctions. **Applications:** Locator of faulty components, prevents cold solder joints, protects heat-sensitive components during soldering.

Number	Description	Price Each
1672-10S	10 Ounce Aerosol	\$14.99

ENVI-RO-TECH™ 1675



Contains a proprietary blend of HCFCs, and does not have any CFCs or 1,1,1 Trichloroethane. Used to penetrate and dissolve non-polar soils such as oil, grease, wax, tar, adhesive and rosin. **Applications:** Contacts and controls, PCBs, motors, generators, switches, industrial machinery, gears, electromechanical devices and automated office equipment.

Number	Description	Price Each ■
1675-12S	12 Ounce Aerosol	\$ 9.46
1675-22S	22 Ounce Aerosol	14.19
1675-P	1 Pint in Shatterproof Glass	16.21
1675-G	1 Gallon in Glass	89.44
1675-5G	5 Gallons in Glass	357.77
1675-54G	54 Gallons in Glass	★

**CALL US FOR
ENVIRONMENTAL
INFORMATION.**

ENVI-RO-TECH™ 1677



Fast acting and highly effective cleaner containing a blend of HCFCs. Used to remove greases, oils, dirt, silicone, fluxes and similar soils. **Applications:** Medical, electrical and electronic equipment, relays, data processing equipment, generators, magnetic tape heads, printed circuit boards, telecommunications, photocopying equipment and switching devices.

Number	Description	Price Each ■
1677-12S	12 Ounce Aerosol	\$ 8.91
1677-22S	22 Ounce Aerosol	13.89
1677-P	1 Pint in Shatterproof Glass	15.88
1677-G	1 Gallon in Glass	84.97
1677-5G	5 Gallons in Metal	339.88
1677-54G	54 Gallons in Metal	★

CONCENTRATED AQUEOUS DEFLUXER

Concentrated, water based defluxer which is added to aqueous cleaning systems, creating an excellent cleaner for soluble fluxes, rosin based fluxes, light oils, silicones, waxes, greases, and similar contaminants often found in electronics manufacturing. **Applications:** Defluxing of printed circuit boards, in-line, water based cleaning systems, ultrasonics, bulk, hand cleaning.

Number	Description	Price Each
1635-P	1 Pint in Plastic	\$ 18.95
1635-G	1 Gallon in Plastic	87.41
1635-5G	5 Gallons in Plastic	186.32
1635-54G	54 Gallons in Plastic	★

ENVI-RO-TECH™ VTR/VCR CLEANER



Formulated to remove harmful contaminants including dirt, nicotine, metallic oxides, tape residues, and other interfering soils from magnetic and optical read/write heads. **Applications:** Instrumentation and industrial tape systems, digital tape decks, VTR/VCR recorders and players, memory systems and hi-fi tape decks.

Number	Description	Price Each ■
1690-12S	12 Ounce Aerosol	\$ 8.89
1690-P	1 Pint in Shatterproof Glass	16.20
1690-G	1 Gallon in Glass	82.70
1690-5G	5 Gallons in Metal	328.27
1690-54G	54 Gallons in Metal	★
1690-DP	Kit: 6 Dram Liquid, 6 Techswab™ Absorb Tip Foam Swabs	4.87
1690-DPKC	Kit: 6 Dram Liquid, 6 Techswab™ Bent Shaft Chamois Swabs	5.07
		6.66

GENESOLV® 2004



An azeotropic solvent used for defluxing, precision cleaning or any application that requires the removal of organic or inorganic contaminants. Contains HCFCs; no CFCs or 1,1,1-Trichloroethane. **Applications:** Printed circuit boards, contacts, relays, switches, gold fingers, telecommunications circuitry and other electronics applications.

Number	Description	Price Each ■
1616-12S	12 Ounce Aerosol	\$ 10.12
1616-P	1 Pint in Shatterproof Glass	16.72
1616-G	1 Gallon in Glass	88.91
1616-5G	5 Gallons in Metal	413.04
1616-54G	54 Gallons in Metal	★

FLUX STRIPPER S™



Heavy-duty defluxer for SA, R, RMA, and RA type fluxes. Works quickly to remove tough organic contaminants such as greases, soldering oils, waxes, silicones, and other similar soils. Contains Methylene Chloride. **Applications:** Printed circuit boards, gold fingers, connectors, microwave and telephone circuitry, avionics, relays, switches and other electronic assemblies.

Number	Description	Price Each ■
1644-12S	12 ounce Aerosol	\$ 10.62
1644-22S	22 Ounce Aerosol	14.78
1644-P	1 Pint in Shatterproof Glass	23.18
1644-G	1 Gallon in Glass	136.13
1644-5G	5 Gallons in Metal	520.63
1644-54G	54 Gallons in Metal	★

ENVI-RO-TECH™ 1676



General duty defluxer for RA, RMA, and SA type fluxes. Can be used as an all purpose cleaner to remove light oils, silicones, waxes, greases, and similar contaminants often found in electronics manufacturing. Contains HCFCs; no CFCs and no 1,1,1-Trichloroethane. **Applications:** Printed circuit boards, gold fingers, connectors, microwave and telephone circuitry, avionics, relays, switches and other electronic assemblies.

Number	Description	Price Each ■
1676-12S	12 Ounce Aerosol	\$ 9.66
1676-22S	22 Ounce Aerosol	14.42
1676-P	1 Pint in Shatterproof Glass	16.38
1676-G	1 Gallon in Glass	75.45
1676-5G	5 Gallons in Metal	348.65
1676-54G	54 Gallons in Metal	★

ENVI-RO-TECH™ 1678



Light duty defluxer for Type R and water soluble fluxes. Can be used as cleaner to remove light oils, polar soils, and white residue. Contains HCFCs; no CFCs and no 1,1,1-Trichloroethane. **Applications:** Printed circuit boards, data processing equipment, medical and electrical equipment, relays, switches and other electronic assemblies.

Number	Description	Price Each ■
1678-12S	12 Ounce Aerosol	\$ 8.73
1678-22S	22 Ounce Aerosol	13.32
1678-P	1 Pint in Shatterproof Glass	15.71
1678-G	1 Gallon in Glass	82.07
1678-5G	5 Gallons in Metal	328.27
1678-54G	54 Gallons in Metal	★

FLUX STRIPPER OF



Heavy duty defluxer for most resin and synthetic based fluxes. Works quickly to remove tough organic contaminants such as greases, soldering oils, waxes, varnishes, silicones, and other similar soils. Contains HCFCs; no CFCs and no 1,1,1-Trichloroethane. **Applications:** Printed circuit boards, gold fingers, connectors, microwave and telephone circuitry, avionics, relays, switches, and other electronic assemblies.

Number	Description	Price Each ■
1681-12S	12 Ounce Aerosol	\$ 6.07
1681-P	1 Pint in Shatterproof Glass	18.04
1681-G	1 Gallon in Glass	43.01
1681-5G	5 Gallons in Metal	167.13
1681-54G	54 Gallons in Metal	★

ENVI-RO-TECH™ 1671



Formulated with HFC-134a, this exceptionally pure, moisture free, inert gas removes particles without the use of harmful solvents. Because HFCs do not harm the ozone, this product has a zero ozone depletion factor. This product removes microscopic contaminants, lint, dust, metallic oxide deposits, and other soils. **Applications:** Electronic equipment, computers, printers, optical cleaning, photographic, industrial, film negatives, data processing equipment, laboratory apparatus, magnetic tape heads, avionics.

Number	Description	Price Each
1671-6S	6 Ounce Aerosol	★
1671-10S	10 Ounce Aerosol	\$14.99
1671-10RS	10 Ounce Aerosol Refill (For use with 1928 Chrome Trigger)	★

■ LARGER QUANTITY DISCOUNTS AVAILABLE ★ PRICING ON REQUEST

ZERO CHARGE® ZINC-FREE STATIC DISSIPATIVE FLOOR COATING

Designed with a non-metallic cross linking agent, this product maintains all the conductive and functional characteristics of our original floor coating. Containing a non-migratory, static dissipative polymer, the coating will maintain a constant surface resistivity of 10^6 to 10^{10} throughout the humidity spectrum. **Applications:** Production areas, telecommunications, computer rooms, hospitals, aerospace, conductive tile (improves life of tile), conventional flooring, sealed concrete, sealed wood.

Number	Description	Price Each
1719-G	1 Gallon in Plastic	\$ 66.68
1719-5G	5 Gallons in Plastic	269.89
1719-54G	54 Gallons in Plastic	★

ZERO CHARGE™ MAT & TABLE TOP CLEANER



A neutral pH cleaner for general use in production areas. Removes insulating contaminants such as flux residues, oils, greases, nicotine, dirt, and grime. **Applications:** Conductive mats, table tops, cleanrooms, computer work stations, soldering stations, office equipment, telecommunications, conductive floor mats, electronic instrumentation, medical equipment, and aerospace.

Number	Description	Price Each
1733-2FP	2 Oz. Finger Pump*	\$ 3.18
1733-PT	1 Pint with Trigger*	6.92
1733-QT	1 Quart with Trigger*	9.36
1733-G	1 Gallon in Plastic	19.91
1733-5G	5 Gallons in Plastic	84.60
1733-54G	54 Gallons in Plastic	★

CONCENTRATE

1740-G	1 Gallon in Plastic	\$150.83
1740-5G	5 Gallons in Plastic	624.96
1740-54G	54 Gallons in Plastic	★

*In anti-static bottle.

ETC.



Non-aerosol, water-based cleaner that removes, without streaking, heavy contaminants from glass, plastic, and metal enclosures. **Applications:** Computer cabinets, printer covers, monitors, CRTs, office equipment, video games, laboratory monitors, scopes, copy machines, and glass reproduction plates.

1742-FP	2 Oz. Finger Pump*	\$ 3.18
	Trigger Sprayer*	7.45
1742-QT	1 Quart with Foaming Trigger Sprayer*	10.68

*In anti-static plastic bottle.

ZERO CHARGE™ SCREEN & KEYBOARD CLEANER



With regular use, this cleaner will eliminate static charge from sensitive surfaces and provide long-term static protection. Reduces dust accumulation and removes contaminants. **Applications:** CRTs, keyboards, office equipment, enclosures, glass, monitors, photocopying and FAX machines, point of sale terminals, calculators, ceramics, veneers, and bar code readers.

Number	Description	Price Each
1743-50PK	50 Pre-Saturated Packets/ Carton	\$14.38
1743-2FP	2 Oz. Finger Pump*	3.18
1743-PT	1 Pint with Trigger*	7.84
1743-QT	1 Quart with Trigger*	11.02

*In anti-static plastic bottle.

ZERO CHARGE™ CLEANROOM 209



A special, non-ionic cleaner formulated to be used in cleanrooms. Product cleans and, with continuous use, eliminates static charge from sensitive surfaces. Cleans common soils and contaminants without affecting cleanrooms. **Applications:** Cleanrooms, CRTs, keyboards, enclosures, glass, monitors, calculators, ceramics, and veneers.

1744-2FP	2 Oz. Finger Pump†	\$ 3.97
1744-PT*	1 Pint with Trigger†	8.98
1744-QT*	1 Quart with Trigger*	12.76
1744-G	1 Gallon in Plastic	28.39
1744-5G	5 Gallons in Plastic	120.70
1744-54G	54 Gallons in Plastic	★

*Packaged bottle and bag. †In anti-static plastic bottle.

ZERO CHARGE™ STATIC DISSIPATIVE FLOOR COATING



This product is a high-gloss floor finish designed for use in electronic production areas, computer rooms, and other static sensitive areas. Contains a non-migratory, static dissipative polymer. **Applications:** Production areas, telecommunications, computer rooms, hospitals, aerospace, conductive tile, conventional flooring, sealed concrete, and sealed wood.

Number	Descriptions	Price Each
1720-G	1 Gallon in Plastic	\$ 53.76
1720-5G	5 Gallons in Plastic	228.48
1720-54G	54 Gallons in Plastic	★

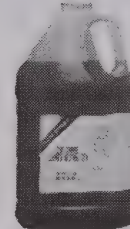
ZERO CHARGE™ FLOOR STRIPPER



A synergistic system designed to rapidly lift coatings from the surface and keep them dispersed. Removes multiple coats of wax, synthetic floor finishes and embedded dirt. No harsh odors. Effective in hard or soft water. **Applications:** Removal of waxes and synthetic floor finishes.

Number	Description	Price Each
1721-G	1 Gallon in Plastic	\$15.64
1721-5G	5 Gallons in Plastic	67.52
1721-54G	54 Gallons in Plastic	★

ZERO CHARGE™ CLEANER/NEUTRALIZER



A highly concentrated, biodegradable anti-static cleaner for general use in production areas. Leaves no film, has no phosphates and is effective in hard or soft water. **Applications:** Preparation for application and cleaning/maintenance of Zero Charge™ static dissipative floor cleaning.

1722-G	1 Gallon in Plastic	\$22.49
1722-5G	5 Gallons in Plastic	91.04
1722-54G	54 Gallons in Plastic	★

ZERO CHARGE® HAND SOAP



This anti-static, soft hand soap is specifically designed for the electronics industry, by gently dissolving oils, flux residues, and other common hand soils, this soap keeps workers' hands clean without leaving contaminants. Designed to be used with Zero Charge® Hand Lotion, this product helps to keep skin moist and reduce triboelectric (static) generation. **Applications:** PCB manufacturing, assembly operations, computer operators, soldering and rework stations, field service, general care of hands.

Number	Description	Price Each
1745-25Q	2 Ounce Squeeze in Anti-Static Plastic Bottle	\$ 2.18
1745-8FP	8 Ounce Anti-Static Bottle With Finger Pump	4.05
1745-G	1 Gallon in Plastic	30.80

For bulk dispensing use:

1912	Gallon Hand Pump	\$ 4.23
1913	Gallon Hand Lotion Dispenser, Wall Mount	131.15

■ LARGER QUANTITY DISCOUNTS AVAILABLE ★PRICING ON REQUEST

ZERO CHARGE™ HAND LOTION



Anti-static formulation designed to improve the contact between personnel and grounding devices. **Applications:** General care of hands.

Number	Description	Price Each ■
1702-2SQ	2 Ounce Squeeze in Anti-Static Plastic Bottle	\$ 2.29
1702-8FP	8 Ounce Anti-Static Bottle with Finger Pump	3.76
1702-G	1 Gallon in Plastic	36.61

For dispensing of gallon material use:

1912	Hand Pump for Gallon	4.23
1913	Gallon Hand Lotion Wall Dispenser	131.15

ZERO CHARGE™ ANTI-STAT



A fast drying, anti-static coating that eliminates static charge and reduces triboelectric generation from most surfaces. **Applications:** Any application requiring static protection.

Number	Description	Price Each ■
1726-2FP	2 Ounce Finger Pump in Anti-Static Plastic Bottle	\$ 3.18
1726-PT	1 Pint Trigger Sprayer in Anti-Static Plastic Bottle	7.92
1726-QT	1 Quart Trigger Sprayer in Anti-Static Plastic Bottle	11.42
1726-G	1 Gallon in Plastic	31.48
1726-5G	5 Gallons in Plastic	133.80
1726-54G	54 Gallons in Plastic	★

CONCENTRATE

1727-G	1 Gallon in Plastic	\$ 294.00
1727-5G	5 Gallons in Plastic	1249.50
1727-54G	54 Gallons in Plastic	★

ZERO CHARGE™ GUARDIAN



Static dissipative, polymer based formulation which eliminates static charge and reduces triboelectric generation. Should be used on porous surfaces. **Applications:** Cardboard storage and shipping boxes, paper, carpets, furniture, draperies, packing materials, and shop coats.

Number	Description	Price Each ■
1734-2FP	2 Ounce Finger Pump in Anti-Static Plastic Bottle	\$ 3.18
1734-PT	1 Pint with Trigger in Anti-Static Plastic Bottle	8.75
1734-QT	1 Quart with Trigger in Anti-Static Plastic Bottle	11.81
1734-G	1 Gallon in Plastic	34.49
1734-5G	5 Gallons in Plastic	139.61
1734-54G	54 Gallons in Plastic	★

CONCENTRATE

1741-G	1 Gallon in Plastic	\$175.96
1741-5G	5 Gallons in Plastic	732.91
1741-54G	54 Gallons in Plastic	★

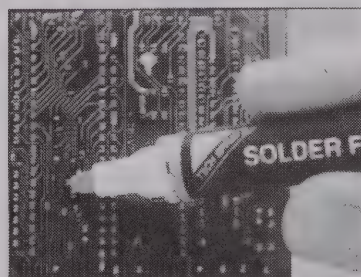
ZERO CHARGE™ GUARDIAN II



A clear, hard, static dissipative coating that offers high optical clarity and protection from abrasion. Formulated for non-porous surfaces and other areas where topical anti-stats do not provide adequate, long-term protection. **Applications:** Tote boxes, work surfaces, IC rails, soldering stations, instrument panels, electronic cabinets, protective covers, heads-up displays, and most hard surfaces requiring static protection.

Number	Description	Price Each ■
1736-2SQ	2 Ounce Squeeze in Anti-Static Plastic Bottle	\$ 3.18
1736-Q	1 Quart in Anti-Static Plastic Bottle	19.66
1736-G	1 Gallon in Plastic	59.98
1736-5G	5 Gallons in Plastic	241.92
1736-54G	54 Gallons in Plastic	★

SOLDER FAULT MARKER



Convenient applicator pen designed to mark solder faults for identification and subsequent re-work. The highly visible yellow and red coloring combined with a black light indicator ensures quick recognition. Marking agent is quick drying, non-stringing, and is removed with warm water or Envi-Ro-Tech™ solvents. **Applications:** Solder fault marking, rework, faulty component identification, and any application that requires temporary identification and marking.

Number	Description	Price Each ■
1850-R	Fault Marking Pen Contains 10ml Red Solut.	\$6.69
1850-Y	Fault Marking Pen Contains 10ml Yellow Solut.	6.69

SOLDER

Single core, wire solder containing a fully activated RA flux that exceeds the RA requirement of QQS-571E, type WRAP.

Number	Description	Price Each ■
1840	16 gauge, 1 pound	\$13.66
1843	16 gauge, ½ pound	7.50
1841	18 gauge, 1 pound	14.01
1844	18 gauge, ½ pound	7.76
1842	21 gauge, 1 pound	14.19
1845	21 gauge, ½ pound	7.94

DISPENSER PACK SOLDER

1836	18 gauge, 1 ounce	\$ 1.87
1837	18 gauge, ½ ounce	1.41

PRO WICK



Pro Wick is a pure copper braid that is highly absorbent because of its unique braid configuration.

PRO WICK FINE BRAID

Number	Size/Color	Length (Ft.)	Width (In.)	Price Each ■
1801-5F	#1/White	5	.030	\$ 1.83
1801-10F	#1/White	10	.030	3.26
1801-25F	#1/White	25	.030	7.98
1801-50F	#1/White	50	.030	15.67
1801-100F	#1/White	100	.030	30.43
1801-500F	#1/White	500	.030	146.85
1802-5F	#2/Yellow	5	.060	1.83
1802-10F	#2/Yellow	10	.060	3.26
1802-25F	#2/Yellow	25	.060	7.98
1802-50F	#2/Yellow	50	.060	15.67
1802-100F	#2/Yellow	100	.060	30.43
1802-500F	#2/Yellow	500	.060	146.85
1803-5F	#3/Green	5	.085	1.87
1803-10F	#3/Green	10	.085	3.36
1803-25F	#3/Green	25	.085	7.98
1803-50F	#3/Green	50	.085	15.67
1803-100F	#3/Green	100	.085	30.43
1803-500F	#3/Green	500	.085	146.85
1804-5F	#4/Blue	5	.100	2.00
1804-10F	#4/Blue	10	.100	3.57
1804-25F	#4/Blue	25	.100	8.93
1804-50F	#4/Blue	50	.100	17.33
1804-100F	#4/Blue	100	.100	33.60
1804-500F	#4/Blue	500	.100	163.00
1805-5F	#5/Brown	5	.145	2.44
1805-10F	#5/Brown	10	.145	4.39
1805-25F	#5/Brown	25	.145	10.19
1805-50F	#5/Brown	50	.145	20.60
1805-100F	#5/Brown	100	.145	39.86
1805-500F	#5/Brown	500	.145	193.35
1806-5F	#6/Red	5	.210	2.60
1806-25F	#6/Red	25	.210	11.24
1806-50F	#6/Red	50	.210	22.03
1806-100F	#6/Red	100	.210	42.76
1806-500F	#6/Red	500	.210	207.35

NUDE WICK UN-FLUXED FINE BRAID

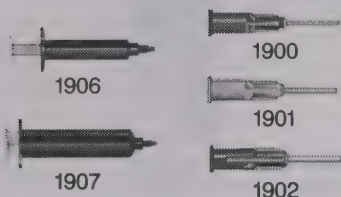
1807-5F	#3/Green	5	.085	\$ 1.85
1807-10F	#3/Green	10	.085	3.32

PRO WICK STATIC DISSIPATIVE BOBBIN

1808-5F	#1/White	5	.030	\$ 1.91
1808-10F	#1/White	10	.030	3.44
1809-5F	#2/Yellow	5	.060	1.91
1809-10F	#2/Yellow	10	.060	3.44
1810-5F	#3/Green	5	.085	2.06
1810-10F	#3/Green	10	.085	3.44
1811-5F	#4/Blue	5	.100	2.27
1811-10F	#4/Blue	10	.100	3.78
1812-5F	#5/Brown	5	.145	2.44
1812-10F	#5/Brown	10	.145	4.37
1813-5F	#6/Red	5	.210	2.69

■ LARGER QUANTITY DISCOUNTS AVAILABLE ★ PRICING ON REQUEST

SYRINGE DISPENSERS



Disposable, plastic, luer lock syringes available in 5cc and 30cc for both manual and pneumatic usage. Highly pigmented plastic protects ultraviolet sensitive materials from exposure. Assortment of tip sizes available to meet viscosity and application needs.

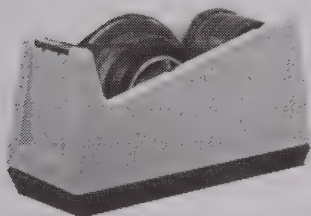
SYRINGES

Number	Capacity	Price Each ■
1906	5 cc	\$1.24
1907	30 cc	1.89

TIPS

Number	Size/Gauge	Price Each ■
1900	Small/21	\$0.72
1901	Medium/18	0.72
1902	Large/14	0.83

WONDERMASK™ TAPE DISPENSER



Wondermask™ tape dispenser designed to accommodate both water and solvent soluble solder masking tapes. The unit offers simple 'pull 'n' cut' dispensing and conveniently winds up the discarded liner on a liner drum. It is intentionally weighted to insure 'stay-in-place' dispensing. There is no need to fasten down the dispenser when operating; yet it is easily portable.

Number	Description	Price Each ■
1922	Wondermask™ Tape Dispenser	\$296.00

CHROME TRIGGER VALVE



A reusable, chrome plated valve assembly with replaceable 1.2 micron filter. The valve's design enables it to be moved from one aerosol can to another without damaging the valve or losing the remaining contents. Attached to a solvent can, the unit delivers a pulsating cleaning action for more efficient cleaning. The 1.2 micron filter, when used with the trigger valve, provides ultra-clean solvent and dusting gas.

Number	Description	Price Each ■
1924-DP 1923	Filtered Trigger Valve 1.2 Micron Filters, 10 per Pack	\$19.26 5.31

CHROME TRIGGER VALVE 22



Trigger valve for Envi-Ro-Tech™ Precision Duster™ Refill only. This valve may be placed then removed from duster without damaging the valve or losing the remaining contents. Unit does not puncture, thereby providing a safer application.

Number	Description	Price Each ■
1928	Chrome Trigger Valve 22	\$19.71

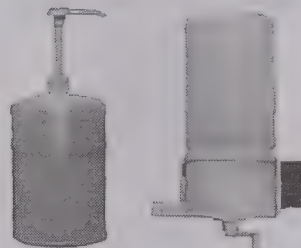
ANTI-STATIC PLASTIC CONTAINERS



Static dissipative, high density polyethylene bottles for dispensing of materials in static sensitive areas. Eight ounce size is equipped with a yorker spout for dispensing high viscosity materials such as Wondermask™ products. Sixteen and thirty-two ounce sizes utilize an atomizing trigger sprayer for dispensing liquids like Zero Charge™ Anti-stat, Zero Charge™ Guardian, and other static control products.

Number	Description	Price Each ■
1909-SQ	8 oz. A/S Squeeze Bottle	\$2.43
1910-PT	16 oz. A/S Plastic	4.86
1911-QT	32 oz. A/S Plastic	6.75

HAND LOTION DISPENSERS

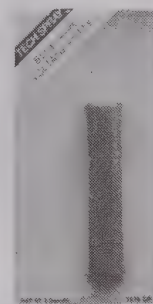


1912 1913

Convenient units that provide a choice for dispensing Zero Charge™ Hand Lotion. The Hand Pump fits securely in the top of the gallon size and gives employees quick access to refilling smaller containers. Wall Mount holds gallon container, has convenient swivel for refill, and provides a pre-measured amount of lotion with every application.

Number	Description	Price Each ■
1912	Gallon Hand Pump	\$ 4.23
1913	Gallon Hand Lotion Wall	131.15

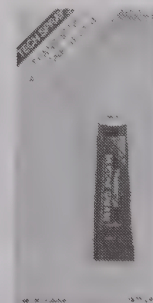
BLUE HIGH VOLTAGE PUTTY



Special compound designed to rebuild fly-back transformer tires that have melted. Also excellent for stopping corona and arcing from anode buttons and yolk connections.

Number	Description	Price Each ■
1976-DP	2 Ounces Blue High Voltage Putty	\$5.27

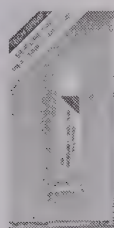
TRANSISTOR SILICONE GREASE



A heat conductive material used to coat the bases of power transistors as they are connected to heat sinks. The grease is heat conductive and will draw the heat away from the transistor allowing it to run cooler.

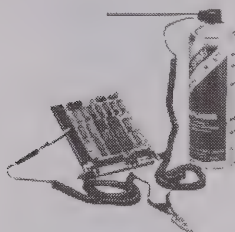
Number	Description	Price Each ■
1977-DP	1 Ounce Squeeze Tube	\$5.34

■ LARGER QUANTITY DISCOUNTS AVAILABLE

SILICONE FREE,
HEAT SINK COMPOUND

Applied under power transistors and other devices that generate heat. Product will not harden, dry out, melt, or contaminate wave solder baths. Exceptionally low bleed and evaporation characteristics allow use with both metal and plastic cap transistors. Designed to eliminate the phenomenon of silicone migration. Product has a functional temperature range from -40°C (-43°F) to 200°C (390°F).

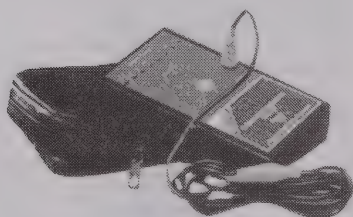
Number	Description	Price Each ■
1978-DP	2 Ounce Squeeze Tube	\$8.48

AEROGROUND® STATIC
CONTROL DEVICE

Aeroground® is a static control device that replaces normal aerosol delivery systems to reduce triboelectric generation. The device includes a concentrically insulated, conductive spray nozzle, special spray head, and appropriate leads that ground the aerosol nozzle extension to the unit being sprayed.

Number	Description	Price Each ■
1953	Aeroground for dusting gases and freeze sprays.	★
1917	12-inch Shunt Bar	5.22

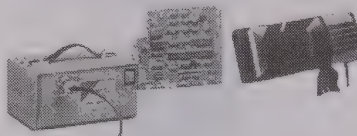
SURFACE RESISTIVITY METER



This meter is a small, lightweight unit which quickly measures surface resistivities using parallel electrode design. Using less than a ten volt potential to measure resistance, the meter produces repeatable results while maximizing safety.

Number	Description	Price Each ■
1930	Meter with carrying case	\$297.50

HAND HELD CURING SYSTEM



UV curing system with comfortable pistol grip handle offers the convenience of mobility or stationary positioning through tripod mounting. User can adjust lamp 90° about the handle. Light is illuminated from the $3\frac{1}{2}'' \times 6''$ emission window and dispersed at 40° covering a large surface area. Unit comes with a 250 watt custom designed lamp that outputs an average intensity of 15 milliwatts/cm² (at 15 inches) and emitting peak UV wavelength of 365nm. UV-A filter prevents harmful UV emissions below 365nm. Optional black light filter can be added to create a high output, inspection lamp.

Specifications:

Lamp: 250 watt, High Pressure Metal Halide
Output Power: 80 milliwatts/cm² (1a 1'')
 15 milliwatts/cm² (1a 15'')

Filtered for UV-A: Yes (Filtered below 310nm)

Number	Description	Price Each
1931	Portable UV Gun, Lamp, Power Supply, UV-A Filter	\$2434.52

Replacements:

1932	Optional Black Light Filter	\$ 297.50
1933	Clear UV-A Filter	332.01
1934	Power Supply Connector	102.82
1935	Thermal Cutoff	23.85
1936	Lamp	333.20
1951	UV Block Wrap Around Glasses	58.91

FINE-L-KOTE™ SR



A type SR silicone resin conformal coating that has excellent moisture and fungus resistance properties. A durable coating offers chemical resistance and is recommended for harsh environments. Contains Opti/Scan for black light inspection. **Applications:** Protects printed circuit boards, thick film circuits, electrical components, transformer coils, and motor starters and field coils.

Number	Description	Price Each ■
2102-12S	12 Ounce Aerosol	\$ 13.83
2102-P	1 Pint in Shatter-proof Glass	51.21
2102-G	1 Gallon in Glass	274.01
2102-5G	5 Gallons in Metal	1133.93
2102-54G	54 Gallons in Metal	★

FINE-L-KOTE™ AR



Economical, acrylic conformal coating that provides insulation against high voltage arcing and corona shorts while resisting moisture and fungus. Product offers limited resistance to common alcohols, ketones, and esters. Contains Opti/Scan, a black light indicator that provides checks for conformity in quality control. **Applications:** Protects printed circuit boards, thick film circuits, and electrical components.

Number	Description	Price Each ■
2103-12S	12 Ounce Aerosol (Contains HCFCs)	\$ 9.28
2103-P	1 Pint in Shatter-proof Glass	18.90
2103-G	1 Gallon in Glass	82.87
2103-5G	5 Gallons in Glass	332.22
2103-54G	54 Gallons in Glass	★

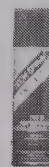
FINE-L-KOTE™ UR



As a urethane conformal coating, Fine-L-Kote™ UR is highly resistant to most solvents, moisture, fungus, and molds. Formulated with a black light indicator, Opti/Scan, to provide checks for conformity in quality control. **Applications:** Protects printed circuit boards, thick film circuits, and electrical components.

Number	Description	Price Each ■
2104-12S	12 Ounce Aerosol (Contains HCFCs)	\$ 9.75
2104-P	1 Pint in Shatter-proof Glass	28.39
2104-G	1 Gallon in Glass	181.44
2104-5G	5 Gallons in Metal	742.21
2104-54G	54 Gallons in Metal	★

FINE-L-KOTE™ HT



A silicone resin, conformal coating designed to withstand extreme temperatures (ranging from $-40^{\circ}\text{C}/-40^{\circ}\text{F}$ to $350^{\circ}\text{C}/662^{\circ}\text{F}$). Exhibits excellent adhesive properties, moisture and fungus resistance, temperature stability, and solvent resistance. Formulated with Opti/Scan, a black light indicator, to provide checks for conformity in quality control. **Applications:** Protects printed circuit boards, thick film circuits, electrical components, transformer coils, and motor starters and field coils.

Number	Description	Price Each ■
2106-12S	12 Ounce Aerosol (Contains HCFCs)	\$ 9.82
2106-P	1 Pint in Shatter-proof Glass	24.93
2106-G	1 Gallon in Glass	126.79
2106-5G	5 Gallons in Metal	586.32
2106-54G	54 Gallons in Metal	★

■ LARGER QUANTITY DISCOUNTS AVAILABLE ★ PRICING ON REQUEST

FINE-L-KOTE™ ER



Product is a clear non-volatile one part epoxy-acrylate coating designed specifically to be cured by a UV-A light. This product offers the rapid cure of acrylic based coatings while providing the superior properties of epoxy systems. High solvent resistance V-A curable coating is 100% active and contains no solvents; thus, this product has extremely low volatile organic emissions. **Applications:** Protects printed circuit boards, thick film circuits, electrical components, transformer coils, and motor starters and field coils.

Number	Description	Price Each ■
2107-30CC	30cc Syringe	\$ 18.48
2107-L	1 Liter in Plastic	126.00

THINNER

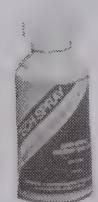
2113-L	1 Liter in Plastic	\$ 84.00
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FINE-L-KOTE™ FS



A single component, flexible, epoxy adhesive coating which cures in 1 to 3 minutes under UV-A light. This 100% active material provides flexibility, shock resistance, and good peel strength. **Applications:** Printed circuit boards, flexible sealant, and dampening vibration.

Number	Description	Price Each ■
2110-5CC	5cc Syringe	\$ 11.60
2110-30CC	30cc Syringe	21.75
2110-L	1 Liter in Plastic	137.59

ENVI-RO-TECH™
ANTI-STATIC FREEZER 1747

A rapidly evaporating HFC-134a product that contains an anti-static agent. Because HFCs do not harm the ozone, this product has a zero ozone depletion factor. Also detects cold solder joints and oxidized junctions. **Applications:** Locator of faulty components, prevents cold solder joints, protects heat sensitive components during soldering.

Number	Description	Price Each
1747-10S	10 Ounce Aerosol	\$13.52

WONDERMASK™ P



A peelable mask for all wave soldering systems, product is non-contaminating, easy to remove, and has excellent resistance to polar and nonpolar solvent systems. When applied, the product appears pink, and when cured, becomes completely translucent red. This product may be used in most common forms of mask applications such as robotic, pneumatic, hand applied, or template screening. **Applications:** Protect plated through holes and contact surfaces from solder during soldering operations, mask desired areas during conformal coating applications, gold fingers, and card edges.

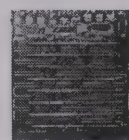
Number	Description	Price Each ■
2211-5CC	5cc Syringe	\$ 4.98
2211-30CC	30cc Syringe	6.34
2211-8SQ	8 Ounce Anti-Static Squeeze Bottle	6.77
2211-G	1 Gallon in Plastic	57.12
2211-5G	5 Gallons in Plastic	228.48
2211-54G	54 Gallons in Plastic	★

WONDERMASK™ P-UVA

A temporary, peelable solder mask formulated to be cured by UV-A light within 15 to 60 seconds. Cured mask is not soluble in water or solvent. The mask may be applied by robotic, pneumatic, hand applications, silk screen, or template screening methods. **Applications:** Protect plated through holes and contact surfaces from solder during solder operations, mask desired areas during conformal coating applications, and protect precious metals.

Number	Description	Price Each ■
2212-5CC	5cc Syringe	\$ 8.40
2212-30CC	30cc Syringe	18.48
2212-L	1 Liter in Plastic	110.04

WONDERMASK™ PT



A Kapton based, anti-static solder masking tape for use on printed circuit boards during wave soldering, cleaning, and conformal coating operations. Tape is a polyamide film coated with a special metallic particle conductive adhesive preventing static generation during taping and removal processes. A non-conductive tape product also is available. **Applications:** Protect plated through holes and contact surfaces from solder during soldering operations.

Number	Description	Price Each ■
CONDUCTIVE ADHESIVE		
2214-T¼	¼ inch wide *	\$ 29.94
2214-T½	½ inch wide *	57.86
2214-T¾	¾ inch wide *	85.81
2214-T1	1 inch wide *	113.79

NON-CONDUCTIVE ADHESIVE ORDER

2215-T¼	¼ inch wide *	\$ 10.00
2215-T½	½ inch wide *	17.59
2215-T¾	¾ inch wide *	26.67
2215-T1	1 inch wide *	34.74

*72 yards per roll.

WE CAN SUPPLY ALL YOUR REQUIREMENTS FOR INDUSTRIAL ELECTRONIC EQUIPMENT AND PARTS. WE OFFER A COMPLETE LINE WITH UP-TO-DATE STOCK, FAST DELIVERY AND PRODUCTION QUANTITY PRICING. CALL FOR INFORMATION ON NEW OR UNLISTED ITEMS.

■ LARGE QUANTITY DISCOUNTS AVAILABLE ★ PRICING ON REQUEST

WONDERMASK™ ST & SD



Tapes and dots that incorporate a non-silicone adhesive used as a temporary solder masking agent.

WONDERMASK™ ST

Number	Description	Price Each ■
2202-T¼	¼" Wide Tape, 72 Yds. Per Roll	\$ 19.59
2202-T½	½" Wide Tape, 72 Yds. Per Roll	38.61
2202-T¾	¾" Wide Tape, 72 Yds. Per Roll	45.75
2202-T1	1" Wide Tape, 72 Yds. Per Roll	58.77

WONDERMASK™ SD

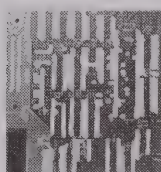
2203-D¼	¼" Wide Dots, 10,000 Dots Per Roll	\$164.24
2203-D½	½" Wide Dots, 10,000 Dots Per Roll	199.87
2203-D½	½" Wide Dots, 10,000 Dots Per Roll	242.74

WONDERMASK™ S-UVA

A temporary, solvent soluble solder mask formulated to be cured by UV-A light within 15 to 60 seconds.

Number	Description	Price Each ■
2204-5CC	5cc Syringe	\$ 8.40
2204-30CC	30cc Syringe	18.48
2204-L	1 Liter in Plastic	110.04

WONDERMASK™ W



A temporary, water soluble solder masking agent formulated with non-contaminating, non-corrosive materials. Wondermask™ W is available in three viscosities: W for hand applications; WA for robotic and pneumatic dispensing equipment, and WS for silkscreening and template screening operations.

WONDERMASK™ W

Number	Description	Price Each ■
2205-5CC	5cc Syringe	\$ 3.48
2205-30CC	30cc Syringe	7.03
2205-8SQ	8 oz. Anti-Static Squeeze Bottle	6.28
2205-G	1 Gallon in Plastic	48.72
2205-5G	5 Gallons in Plastic	207.06
2205-54G	54 Gallons in Plastic	★

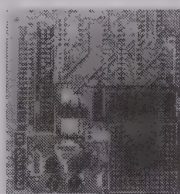
WONDERMASK™ WA

2206-P	1 Pint in Plastic	15.88
2206-G	1 Gallon in Plastic	50.40
2206-5G	5 Gallons in Plastic	214.20
2206-54G	54 Gallons in Plastic	★

WONDERMASK™ WS

2207-P	1 Pint in Plastic	\$ 15.12
2207-G	1 Gallon in Plastic	55.44
2207-5G	5 Gallons in Plastic	226.80
2207-54G	54 Gallons in Plastic	★

WONDERMASK™ WT & WD



This product is supplied as tapes and dots that incorporate a polyvinyl alcohol adhesive used as a temporary solder masking agent. Completely soluble in all water based systems. Leaves no contaminating residues.

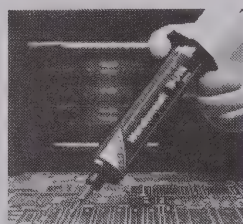
WONDERMASK™ WT

Number	Description	Price Each ■
2208-T¼	¼" Wide Tape, 36 Yds. Per Roll	\$ 11.32
2208-T½	½" Wide Tape, 36 Yds. Per Roll	19.81
2208-T¾	¾" Wide Tape, 36 Yds. Per Roll	28.44
2208-T1	1" Wide Tape, 36 yds. Per Roll	36.14

WONDERMASK™ WD

2209-D¼	¼" Wide Dots, 10,000 Dots Per Roll	\$171.02
2209-D½	½" Wide Dots, 10,000 Dots Per Roll	204.36
2209-D½	½" Wide Dots, 10,000 Dots Per Roll	248.29

WONDERMASK™ W-UVA



A temporary, water soluble solder mask formulated to be cured by UV-A light within 15 to 60 seconds. Extremely low volatile organic emissions. Withstands temperatures up to 343°C/650°F. May be applied by robotic, pneumatic, hand application, silkscreen, or template screening methods.

Number	Description	Price Each ■
2210-5CC	5cc Syringe	\$ 8.40
2210-30CC	30cc Syringe	18.48
2210-L	1 Liter in Plastic	110.04

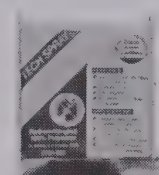
TECHCLEAN™ WIPER



Designed for cleanroom maintenance, this hydroentangled cellulose/polyester wipe has high absorbency with extra low particulate and chemical extractables.

Number	Description	Price Each ■
2350-100	100 9" × 9" C-Fold Wipes	\$15.06

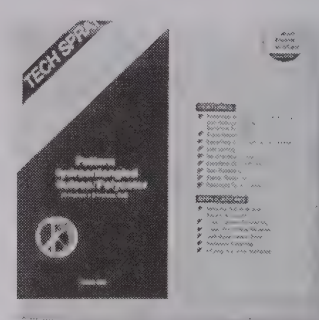
TECHCLEAN™ ABSORBWIPE



This soft, hydroentangled, 100% polyester wipe is perfect for cleaning optical equipment and other sensitive surfaces. Absorbwipe has an absorption rate of six times its own weight. **Applications:** Cleanroom maintenance, and cleaning and burnishing.

Number	Description	Price Each ■
2351-100	100 4" × 4" Flat Wipes	\$ 4.66
2352-100	100 9" × 9" Flat Wipes	14.35

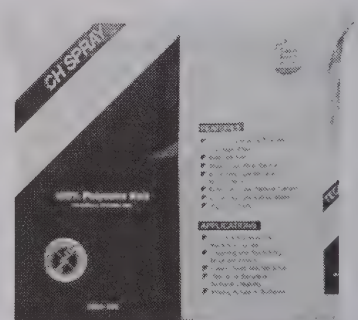
TECHCLEAN™ ULTRAWIPE



Patterned, hydroentangled cellulose/ polyester wipe designed with a unique texture. Textured pattern enhances the aggressiveness of the wipe by providing a place for the contaminants to hide. **Applications:** Absorbs solvents and aqueous liquids, cleaning and burnishing, cleanroom maintenance, wiping abrasive surfaces, and static sensitive areas.

Number	Description	Price Each ■
2353-100	100 9" × 9" Flat Wipes	\$22.40
2354-100	100 12" × 12" Flat Wipes	37.13

TECHCLEAN™ PURWIPE

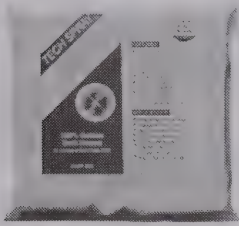


100% continuous filament polyester fiber in an interlocking knit which gives this wipe super high absorbency, low particulate generation, and high durability. **Applications:** Absorbs solvents and aqueous liquids, cleaning and burnishing magnetic heads, cleanroom maintenance, optical or sensitive surface cleaning, and wiping abrasive surfaces.

Number	Description	Price Each ■
2355-100	100 9" × 9" Flat Wipes	\$26.76
2356-100	100 12" × 12" Flat Wipes	56.25

■ LARGER QUANTITY DISCOUNTS AVAILABLE ★ PRICING ON REQUEST

TECHCLEAN™ TWILLWIPE



100% cotton twill weave product designed for wiping abrasive surfaces to dislodge soils. It can be used in static sensitive areas. Wipe is cut on the bias (45° angle) to prevent ravelling. **Applications:** High temperature areas, clean-room applications, cleaning and burnishing, acid removal, spillage cleaning, and wiping abrasive surfaces.

Number	Description	Price Each ■
2357-100	100 6" x 6" Flat Wipes	\$14.17

ENVI-RO-TECH™ KLEEN-IT



A cleaner/lubricant formulated to quickly penetrate and flush away grease, dirt, oil, dust, and oxidized surface metals, leaving a thin protective coating of silicone to lubricate and protect against corrosion. **Applications:** Switches, tuners, avionics, data processing, photographic, electronic business equipment, controls, timing devices, counters, and gauges. Contains HCFC. No CFC's.

Number	Description	Price Each ■
2410-6S	6 Ounce Aerosol	\$ 5.34
2410-12S	12 Ounce Aerosol	10.26

FD PLUS™



Formulated of Freon® TF and silicone which cleans effectively while depositing a thin lubricant film that will not evaporate. Protects against moisture and corrosion. Silicone lubricant withstands temperatures from -54°C/-65°F to 177°C/350°F. **Applications:** Avionics, data processing, photographic, electronic equipment, controls, timing devices, counters, switches, and gauges.

Number	Description	Price Each
2403-12S	12 Ounce Aerosol	\$16.60

ENVI-RO-TECH™ BLUE STUFF™



Unique formulation which cleans, polishes, and lubricates drum and switch type tuner contacts. Blue Stuff™ is formulated with mild abrasive cleaner dispersed throughout a thick lubricant. This combination works continuously removing oxidation and improving the electrical contact for months after application. **Applications:** Drum and switch type tuners. Contains HCFC. No CFC's.

Number	Description	Price Each ■
2411-12S	12 Ounce Aerosol	\$10.26

ENVI-RO-TECH™ LUBE-A-TROL™



A special blend of heavy duty white lithium grease designed to give long lasting lubrication and protection, thus reducing wear on wire wound and carbon controls. While lubricating, removes dirt, oils, greases, nicotine, and similar soils. **Applications:** Potentiometers, attenuators, audio tuning components, L pads, rheostats, T pads, and other wire wound components. Contains HCFC. No CFC's.

Number	Description	Price Each ■
2412-12S	12 Ounce Aerosol	\$10.26

MULTI-OIL



A special low viscosity, non-gumming oil formulated as a general purpose lubricant. While penetrating quickly, displaces water to preserve and lubricate moving parts. Rust and corrosion inhibitors have been added for long-term protection. **Applications:** Computers, tape recorders, instruments, office machines, record changers, small motors, all moving parts, loosening frozen TM yokes, and loosening rusted screws.

Number	Description	Price Each ■
2402-12S	12 Ounce Aerosol	\$7.28

SLIC



Silicone lubricant specifically formulated to lubricate, protect, and waterproof mechanical devices found in electrical and electronic equipment. No CFCs; contains HCFCs. **Applications:** Lubricates solenoids, plastic gears, rubber parts, register wheels, printer parts, printer head guides, ribbon advances, FAX machines, copy machines, laser printers, battery terminals, and auto antennas.

Number	Description	Price Each ■
2405-12S	12 Ounce Aerosol	\$6.77

PL PENETRATING LUBRICANT



Lubricant formulated to penetrate rust and corrosion in order to loosen or remove rusted nuts, screws, bolts, and studs. Product also removes dirt, grease, tar, gum, and mud while leaving a coating that lubricates and protects against subsequent corrosion. No CFCs; contains HCFCs. **Applications:** Machinery and automotive.

Number	Description	Price Each ■
2408-12S	12 Ounce Aerosol	\$7.78

ZAP-IT

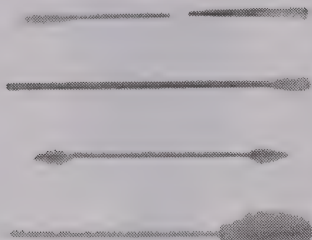


All-purpose lubricant specifically designed to protect and coat metals, inhibiting rust and stopping corrosion. **Applications:** Protecting and lubricating copper contacts, distributors, battery terminals, electrical motors, dies, fixtures, fuse panels, guns, jigs, locks, motors, sliding doors, small appliances, telescoping towers, rollers, pulleys, protects against welding splatter, and fishing gear.

Number	Description	Price Each ■
2409-12S	12 Ounce Aerosol	\$ 6.35
2409-G	1 Gallon in Glass	46.96
2409-5G	5 Gallons in Metal	128.79
2409-54G	54 Gallons in Metal	★

■ LARGER QUANTITY DISCOUNTS AVAILABLE ★PRICING ON REQUEST

TECHSWABS™



Techswabs™ use specialized materials that ensure low particle generation and solvent compatibility. Swab tips are made from a variety of quality materials to suit different tasks. Most are heat sealed onto handles to avoid the contamination residues of adhesives. Handles are fashioned from a selection of natural and man-made materials chosen for their flexibility and durability. Product is packaged in our Class 100 cleanroom in static dissipative resealable bags that control both the electrostatic discharge and contamination.

Number*	Tip Width	Handle Length	Price Each ■
COTTON SWABS			
2300-100	3/16"	6"	\$ 2.16
2300-1000	3/16"	6"	19.32
2301-100	3/16"	6"	2.07
2301-1000	3/16"	6"	14.30
2313-25	1/8"	3 3/4"	4.66

Number	Tip Width	Handle Length	Price Each ■
FOAM SWABS			
2302-10	7/16"	6"	\$ 2.95
2302-50	7/16"	6"	9.28
2302-1000	7/16"	6"	123.31
2303-10	1/4"	6"	3.36
2303-50	1/4"	6"	9.28
2303-1000	1/4"	6"	123.40
2304-10	3/4"	6"	4.21
2304-50	3/4"	6"	13.37
2304-1000	3/4"	6"	201.33
2305-10	1/2"	6"	4.31
2305-50	1/2"	6"	13.64
2305-1000	1/2"	6"	207.48
2306-10	1/2"	5"	3.57
2306-50	1/2"	5"	10.30
2306-1000	1/2"	5"	139.36
2307-10	3/16"	4"	4.44
2307-50	3/16"	4"	15.24
2307-1000	3/16"	4"	233.70

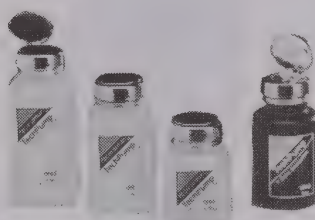
Number	Tip Width	Handle Length	Price Each ■
POLYESTER SWABS			
2309-10	1/4"	6"	\$ 5.10
2309-50	1/4"	6"	17.83
2309-1000	1/4"	6"	260.10
2310-10	1/4"	3"	5.10
2310-50	1/4"	3"	17.83
2310-1000	1/4"	3"	260.10
2311-10	1/8"	3"	5.46
2311-50	1/8"	3"	20.24
2311-1000	1/8"	3"	279.55
2312-10	1/16"	3"	5.46
2312-50	1/16"	3"	20.24
2312-1000	1/16"	3"	279.55

Number	Tip Width	Handle Length	Price Each ■
CHAMOIS SWABS			
2314-10	3/8"	3 1/2"	\$ 5.39
2314-50	3/8"	3 1/2"	19.55
2314-1000	3/8"	3 1/2"	309.96
2315-10	3/8"	4 3/4"	5.58
2315-50	3/8"	4 3/4"	19.99
2315-1000	3/8"	4 3/4"	326.76

Number	Tip Width	Handle Length	Price Each ■
SPECIALTY SWABS			
2308-10	.093"	6"	\$ 5.01
2308-50	.093"	6"	16.49
2308-1000	.093"	6"	259.86
2316-10	1/2"	6"	4.63
2316-50	1/2"	6"	15.70
2316-1000	1/2"	6"	251.63

* Suffix denotes number of items in package.

TECHPUMP & BOTTLES



TechPump bottles are designed for the precision control and dispensing of solvents in electronic and laboratory environments. The distinctive pumping mechanism combined with a high density polyethylene (HDPE) bottle affords a complete unit for use with a broad range of cleaning solvents. The dish type pump dispenser allows for a clean, one handed operation which prevents the use of excessive solvent and keeps contaminants from entering the container. The pump includes a hinged lid to keep out impurities while the container is not in use and stainless steel parts to facilitate the use of aggressive solvents. A precision valve seals contents to reduce vapor and product loss. To insure total purity, the unit is shipped with a cellophane band sealing the pump head. The Static-Dissipative TechPump & Bottle incorporates carbon black with HDPE to produce a static-dissipative container for use in ESD sensitive areas. **Applications:** For use with all Tech Spray Envi-Ro-Tech cleaners/degreasers and defluxing solvents, isopropanol, ethanol, methanol, mixed alcohols, turpenes, freons, water based solvents, acetone (Not for use with iodines, acids, or bases).

Number	Description	Price Each
1980	4 Ounce Bottle with Pump	\$11.04
1981	6 Ounce Bottle with Pump	11.20
1982	8 Ounce Bottle with Pump	11.36
1983	6 Ounce Static Dissipative Bottle with Pump	13.84

TECH HOLD™ APPLICATOR



A convenient, reusable applicator that easily and accurately dispenses a cyanoacrylate (Super Glue) based adhesive. This unique applicator allows the adhesive to be applied with push button accuracy in a continuous or dotted line without creating a mess. This dispenser uses disposable cartridges. **Applications:** Bonds metal, rubber, ceramics, plastics, glass, wood, veneers, fabrics, vinyl, naugahyde, cardboard, cork, leather, nylon, Delrin®, and other similar surfaces.

Number	Description	Price Each ■
2500-1	72 Applicators	\$2.84
2500-DP	1 Applicator Card	3.73

FOR REPLACEMENT CARTRIDGES

Number	Description	Price Each ■
2501-1	144 Cartridges	\$1.41
2501-DP	2 Cartridges Carded	3.73

TECH HOLD™

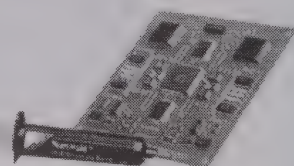


General purpose, single component cyanoacrylate adhesive that exhibits high strength, fast bonding, and high impact holding. Flows into small opening up to .004 inches.

Applications: Bonds metal, rubber, ceramics, plastics, glass, wood, veneers, fabrics, vinyl, naugahyde, cardboard, cork, leather, nylon, Delrin®, and other similar surfaces; can be used as a wire tacking agent, SMT component holding, and other electronics applications.

Number	Description	Price Each ■
2502-1	1 Ounce Cyanoacrylate	\$9.19
2503-DP	3 Gram Cyanoacrylate	1.41

TECH HOLD™ UVA STRUCTURE BOND



Structural bonding adhesive cured by exposure to UV-A light or temperatures above 93°C/200°F. Material is designed to create structural bridge bonds between multiple surfaces. **Applications:** Steel, galvanized metals, glass, mineral filled nylon and glass, polycarbonate, ferrite, aluminum, and printed circuit board repair.

Number	Description	Price Each ■
2505-5CC	5cc Syringe	\$ 6.64
2505-30CC	30cc Syringe	16.80
2505-L	1 Liter in Plastic	217.73

TECH HOLD™ UVA WIRE TACK



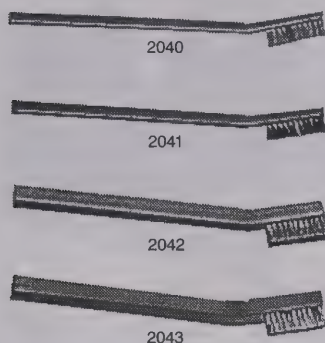
Adhesive formulated to provide rapid cure under UV-A light for structural wire tacks of printed circuit boards. High viscosity forms a non-migrating gel that cures in seconds when exposed to UV-A light. May be peeled off by softening product with alcohols or acetone. **Applications:** Wire and component tacking on printed circuit boards, soldermasking, potting, and surface mount and through hold devices.

Number	Description	Price Each ■
2506-5CC	5cc Syringe	\$ 6.64
2506-30CC	30cc Syringe	27.27
2506-L	1 Liter in Plastic	213.93

*Pricing on request.

■ LARGER QUANTITY DISCOUNTS AVAILABLE

CLEANROOM BRUSHES

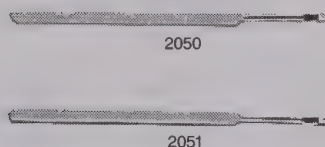


Application: All materials for these high quality brushes are manufactured for clean room and static sensitive environments.

Number*	Brush Face (L x W)	Handle Length	Price Each ■
2040-DP	1 1/4" x 1/8"	6 1/2"	\$ 8.55
2040-1	1 1/4" x 1/8"	6 1/2"	7.04
2041-DP#	1 1/4" x 1/8"	6 1/2"	10.06
2041-1#	1 1/4" x 1/8"	6 1/2"	8.38
2042-DP	1 1/4" x 1/8"	6 1/2"	14.69
2042-1	1 1/4" x 1/8"	6 1/2"	12.49
2043-DP#	1 1/4" x 1/8"	6 1/2"	16.00
2043-1#	1 1/4" x 1/8"	6 1/2"	13.65

*-DP suffix denotes display pack, -1 suffix denotes bulk pack. #ESD safe brushes.

INSTRUMENT CLEANING BRUSHES

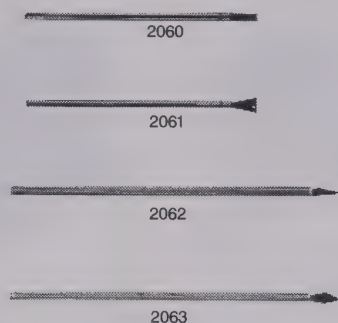


Application: Specifically designed brushes for precise and pin-point cleaning of instrumentation.

Number*	Brush Face (L x W)	Handle Length	Price Each ■
2050-DP	1/8" x 1/8"	5 1/2"	\$8.55
2050-1	1/8" x 1/8"	5 1/2"	7.04
2051-DP	1/8" x 1/8"	5 1/2"	9.59
2051-1	1/8" x 1/8"	5 1/2"	7.96

*-DP suffix denotes display pack, -1 suffix denotes bulk pack.

APPLICATION BRUSHES

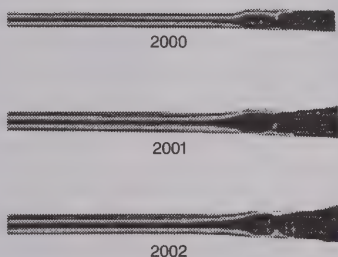


Application: Assortment of brushes for applying coatings without the risk of bristle marks. Roll swaged bristle retention ensures minimum bristle loss.

Number*	Bristle Trim; Diameter	Handle Length	Price Each ■
2060-DP	5/8" x 3/16"	4 3/4"	\$11.71
2060-1	5/8" x 3/16"	4 3/4"	9.70
2061-DP	5/8" x 3/16"	4 3/4"	11.41
2061-1	5/8" x 3/16"	4 3/4"	9.44
2062-DP	A-5/8", B-Chisel; 3/16"	7"	5.66
2062-1	A-5/8", B-Chisel; 3/16"	7"	4.32
2063-DP	A-5/8", B-Chisel; 3/16"	7"	5.66
2063-1	A-5/8", B-Chisel; 3/16"	7"	4.32

*-DP suffix denotes display pack, -1 suffix denotes bulk pack.

ACID BRUSHES

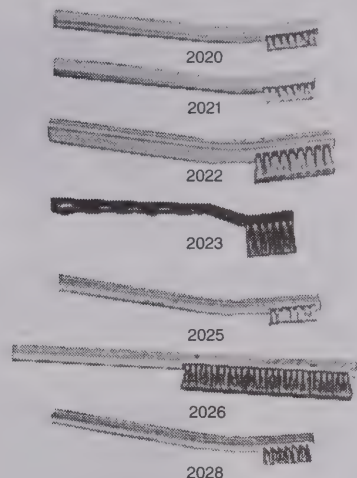


Application: Inexpensive, disposable brushes for cleaning applications.

Number*	Brush Face (L x W)	Handle Length	Price Each ■
2000-144	1/8" x 3/8"	5 1/4"	\$14.20
2001-144	1/8" x 1/2"	5 1/4"	18.84
2002-144	1/8" x 9/16"	5 1/4"	23.74

*-144 suffix denotes number of brushes in a package.

GENERAL CLEANING BRUSHES

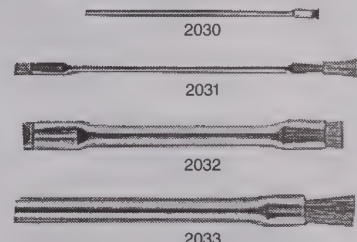


Application: Assortment of quality brushes ranging from stiff bristles for heavy scrubbing to soft bristles for sensitive cleaning.

Number*	Brush Face (L x W)	Handle Length	Price Each ■
2020-DP	1 3/4" x 5/16"	7 3/4"	\$ 2.87
2020-1	1 3/4" x 5/16"	7 3/4"	1.75
2021-DP	1 3/4" x 5/16"	7 3/4"	3.55
2021-1	1 3/4" x 5/16"	7 3/4"	2.59
2022-DP	2 1/4" x 1"	8 3/4"	7.18
2022-1	2 1/4" x 1"	8 3/4"	5.82
2023-DP	1 1/4" x 5/16"	7 3/4"	3.14
2023-1	1 1/4" x 5/16"	7 3/4"	2.22
2025-DP	1 3/8" x 3/16"	7 3/4"	7.42
2025-1	1 3/8" x 3/16"	7 3/4"	6.03
2026-DP	5" x 1/2"	10 3/4"	10.34
2026-1	5" x 1/2"	10 3/4"	8.63
2027	7/16" x 3/8"	5"	★
2028-DP	1 3/8" x 5/16"	7 3/4"	4.09
2028-1	1 3/8" x 5/16"	7 3/4"	3.07
2029	7/16" x 3/8"	5"	★

*-DP suffix denotes display pack, -1 suffix denotes bulk pack.

TECHNICAL CLEANING BRUSHES



Application: Specially designed brushes for cleaning printed circuit boards and SMT assemblies.

Number*	Brush Face (L x W)	Handle Length	Price Each ■
2030-DP	1/16" x 1/8"	3 1/2"	\$5.42
2030-1	1/16" x 1/8"	3 1/2"	4.25
2031-DP	1/8" x 3/16"	4 1/2"	6.23
2031-1	1/8" x 3/16"	4 1/2"	4.96
2032-DP	1/4" x 1/2"	4 1/2"	6.17
2032-1	1/4" x 1/2"	4 1/2"	4.92
2033-DP	1/4" x 1/2"	4 1/2"	4.68
2033-1	1/4" x 1/2"	4 1/2"	3.60

*-DP suffix denotes display pack, -1 suffix denotes bulk pack.

**OUR PRICES ARE COMPETITIVE
DUE TO OUR ASSOCIATION WITH
A NATIONAL BUYING GROUP.**

★PRICING ON REQUEST ■LARGER QUANTITY DISCOUNTS AVAILABLE

ZIPPER TOOL CASES



THE "MINI"

Mfr. No.	Description	Price Each
601ZT	Black cordura exterior and industrial strength memory zipper. 14 interior sewn tool pockets and one pouch. 10" x 7" x 2".	\$44.00



TROUBLE SHOOTER

Mfr. No.	Description	Price Each
660ZT	Black cordura—13" x 10" x 2 1/2"—Made of Dupont cordura—Two heavy duty poly web straps—29 sewn tool pockets—Outside meter pocket—1 interior pouch	\$80.00



TECHNICIAN

Mfr. No.	Description	Price Each
665ZT	Black cordura—14" x 13" x 2 1/2"—Made of DuPont cordura—Two heavy duty poly web straps—Handles leather wrapped—Heavy duty zipper—27 molded tool pockets—Outside meter pocket—Literature pocket—2 interior pouches	\$95.00



SITE MANAGER

Mfr. No.	Description	Price Each
670ZT	Black cordura—18 1/2" x 13" x 2 1/2"—Made of Dupont cordura—Two heavy duty poly web straps—Handles leather wrapped—Heavy duty zipper—27 molded tool pockets—Magnet board—1 interior pouch—outside meter pocket—Literature pocket	\$112.00



685ZT

675ZT

TELECOMMUNICATIONS

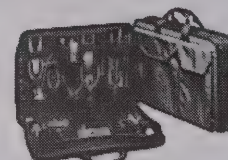
Mfr. No.	Basic Telecom Description	Price Each
675ZT	Black cordura—14 1/2" x 13 1/2" x 3"—Made of Dupont cordura—Two heavy duty poly web straps—Handles leather wrapped—Sewn pockets—Outside meter pocket—Literature pocket—Heavy duty zipper	\$110.00

MASTER TELECOM

685ZT	Black cordura exterior, heavy duty zipper, two poly web straps with leather wrapped handles, detachable shoulder strap, two exterior pockets and one document pocket. Interior has 24 sewn tool pockets, velcro handset holder, and 5 small parts pouches. Can be hung by handle on wall hook for easy access utilizing unique side strapping. 14" x 13" x 3".	\$140.00
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666ZT



641ZT/642ZT

MASTER TECHNICIAN

Mfr. No.	Description	Price Each
666ZT	Gray cordura exterior, heavy duty zipper, two poly web straps with leather wrapped handles and three exterior pockets. Interior has 47 tool pockets and one pouch. Comes with detachable shoulder strap. 15" x 11" x 3".	\$115.00

ALL PURPOSE FIELD SERVICE

641ZT	Gray cordura exterior, heavy duty zipper, two poly web straps with leather wrapped handles, two exterior pockets and one literature pocket. #641ZT features pallet set #7 and 8 for electronics and office machine installation and repair. #642ZT utilizes our pallets #9 and 10 for computer and high technology maintenance and installation. 18" x 13" x 3".	\$126.00
642ZT		\$126.00



FIELD SERVICE SUPERVISOR

Mfr. No.	Description	Price Each
691ZT	Gray cordura exterior, heavy duty zipper, two poly web straps with leather wrapped handles, two exterior pockets, and one literature pocket. Interior features, 3-pocket vinyl file folder and full size tool pallet. 18" x 13" x 3".	\$125.00

(TOOLS ARE NOT INCLUDED)

MAKE YOUR OWN INDUSTRIAL CASES & CIRCUIT BOARD CASES

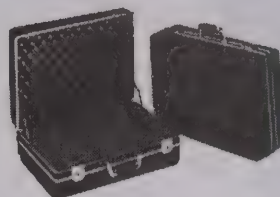
ABS MOLDED MAKE YOUR OWN CASES



- FEATURES:**
- STEEL CORE HANDLE
 - DRAWBOLT KEY LOCKS
 - ALUMINUM FRAME
 - 3 PIECES POLYETHER FOAM
 - BOTTOM FOAM PRE-CUT (CUBED)
 - COLOR: BLACK

Mfr. No.	Interior Dimensions (In.)	Depth of Body Section (In.)	Price Each
1410	10 × 7 × 5	3	\$50.00
1412	12 × 8 × 5	3	54.00
1414	12 × 11 × 5	3	60.00
1416	16 × 12 × 5	3	64.00
1419	18 × 13 × 5	3	82.00
1425	18 × 13 × 7	4	88.00
1426	16 × 12 × 7	4	72.00

ABS DELUXE MOLDED MAKE YOUR OWN CASES

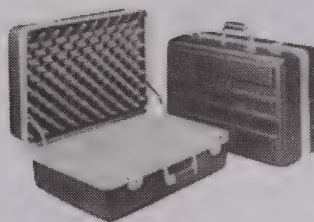


- FEATURES:**
- SQUARE LOCK
 - GOLF GRIP HANDLE
 - CAST CHROME LOCKS
 - ALUMINUM FRAME
 - 3 PIECES POLYETHER FOAM
 - BOTTOM FOAM PRE-CUT (CUBED)
 - COLOR: BLACK

Mfr. No.	Interior Dimensions (In.)	Depth of Body Section (In.)	Price Each
1607-P*	12 × 9 × 8	4	\$ 84.00
2005	20 × 14 × 5	3	100.00
2007	20 × 14 × 7	4	106.00
2007-P*	20 × 14 × 7	4	126.00
2205	22 × 16 × 5	3	116.00
2207	22 × 16 × 7	4	124.00
2207-P*	22 × 16 × 7	4	144.00
2407	24 × 18 × 7	4	136.00
2807	28 × 20 × 7	4	170.00
2807-P*	28 × 20 × 7	4	190.00

* "P" denotes polyethylene cases

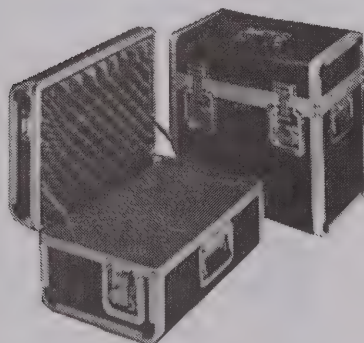
POLYETHYLENE MAKE YOUR OWN CASES EXCELLENT FOR SHIPPING PURPOSES



- FEATURES:**
- GOLF GRIP HANDLE
 - CAST CHROME LOCKS
 - HEAVY DUTY ALUMINUM FRAME
 - PIANO HINGE
 - 3 PIECES POLYETHER FOAM
 - BOTTOM FOAM PRE-CUT (CUBED)
 - COLOR: BLACK

Mfr. No.	Interior Dimensions (In.)	Depth of Body Section (In.)	Price Each
1901-P	18 × 13 × 7	4	\$100.00
1908-P	19 × 13 × 8	4	160.00
2209-P	22 × 15 × 9	5	180.00

FABRICATED-LINE BENT ATA 300



Heavy duty black polyethylene material with unique continuous industrial frame both on the interior and exterior of case for maximum strength. All hardware is recessed for wearability and shipping purposes. Cases come with combination lock, spring loaded handle and security type bolts. Top and body of cases lined with high density foam plus solid filler foam for maximum protection and flexibility. TO ORDER CASES IN "SAFETY" YELLOW ADD "Y" TO PLATT NUMBER, I.E. 1008Y

Mfr. No.	Interior Dimensions (In.)	Body Depth (In.)	Price Each
1008	12 × 8 × 15	12	\$ 250.00
1012	16 × 10 × 17	13	350.00
1013	18 × 11 × 9	6	300.00
1016	20 × 14 × 13	10	380.00
1018	26 × 18 × 18	14	800.00
1112L	36 × 24 × 12	8	1046.00

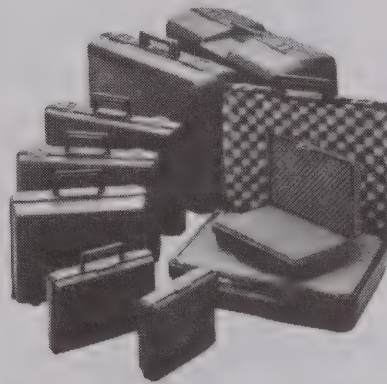
SOFT CORDURA SERIES



Black cordura padded zipper cases designed to carry scopes, computers, test equipment and instrumentation. Cases come with heavy duty adjustable shoulder strap. Style "A" cases are top opening; Style "B" cases open conventionally.

Mfr. No.	Interior Dimensions (In.)	Style	Price Each
101K	13 × 17 × 9	A	\$115.00
102K	18 × 14 × 7	A	100.00
103K	9 × 12 × 5	A	65.00
201K	12 × 14 × 5	B	80.00
202K	20 × 16 × 9	B	130.00

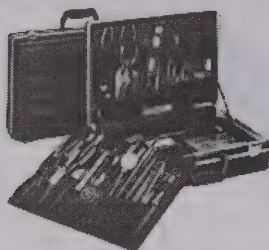
BLOW MOLDED MAKE YOUR OWN CASES



Platt's Blow Molder, low cost, "make your own" cases are manufactured from prime, high density polyethylene. They feature double wall construction and the textured exteriors resist dents, cracking and scuffs. The shells are unaffected by temperatures as low as -70°F and as high as 180°F. All cases meet U.S. 94B specifications as an electrical insulator and are impervious to chemical attack.

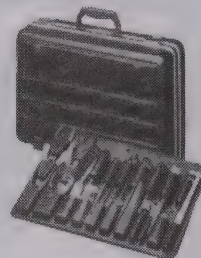
Mfr. No.	Outside Dimensions (In.)	Price Each
707	19 × 14 × 7	\$89.50
607	17 × 12 × 5	34.50
507	15 × 11 × 4 1/4	36.00
407	13 × 10 × 5 1/2	29.50
307	12 × 8 × 3 3/4	22.25
207	10 1/2 × 7 × 3	14.50
107	8 1/2 × 7 × 2 1/2	12.00

TOOL CASES



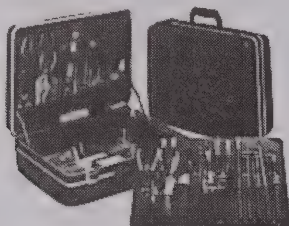
ABS MOLDED THERMOPLASTIC TOOL CASES

Mfr. No.	Description	Price Each
600T	Black—18" x 13" x 6"—2 molded pallets—Chrome plated brass key locks, steel core handle—Literature pocket—Bottom divider	\$140.00
605T	Black—Same as 600T except 5" deep—1 pallet	130.00



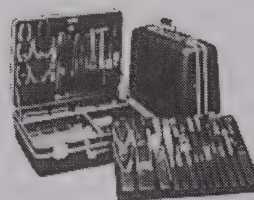
MOLDED POLYETHYLENE TOOL CASE

Mfr. No.	Description	Price Each
980T	Black—18" x 13" x 6"—2 molded pallets—Presto cast chrome key locks—Cushioned handle—Literature pocket—Full length piano hinge	\$150.00



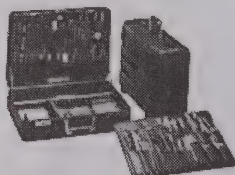
INJECTED MOLDED POLYPROPYLENE TOOL CASES

Mfr. No.	Description	Price Each
880T	Black—18" x 13" x 6"—Chemical resistant—2 molded pallets—Chrome plated steel key locks—Steelcore handle—Literature pocket—No bottom divider	\$135.00



DELUXE INJECTION MOLDED POLYPROPYLENE TOOL CASES

Mfr. No.	Description	Price Each
800T	Black—18" x 13" x 6"—Chemical resistant—2 molded pallets—2 cast chrome key locks—Golf-grip handle—Bottom divider—Literature pocket	\$160.00
805T	Black—Same as 800T except 5" deep—1 pallet	150.00



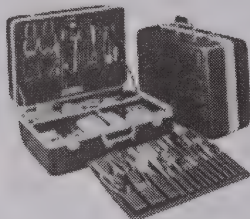
POLYETHYLENE TOOL CASES

Mfr. No.	Description	Price Each
946T	Black—18" x 13" x 6"—Chemical resistant, with contemporary molded rib shell, and black anodized frame. Recessed key locks, full length piano hinge, and golf grip handle. Interior has two molded pallets, literature pocket, and bottom divider.	\$165.00



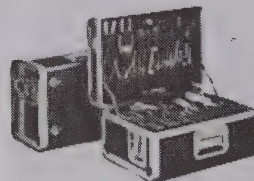
DELUXE SOFT/MOLDED TOOL CASES

Mfr. No.	Description	Price Each
610T	Gaucho brown vinyl—18" x 13" x 5"—Unique soft/molded construction—Combination lock—2 cast chrome bolts—1 molded pallet—Literature pocket—Bottom divider	\$180.00



DELUXE POLYETHYLENE TOOL CASES

Mfr. No.	Description	Price Each
908T	Black—19" x 13" x 8"—Chemical resistant—2 molded pallets—Piano hinge—Heavy duty frame with sealing gasket—Bottom divider—Cast chrome key locks—Literature pocket	\$195.00
908T/C	908T with combination lock	205.00
906T	Black—Same as 908T except 6" deep—1 pallet	185.00
906T/C	906T with combination lock	195.00



FABRICATED-LINE BENT TOOL CASES

Mfr. No.	Description	Price Each
747T	Heavy duty—19" x 13" x 10"—black polyethylene material with unique continuous industrial frame both on the exterior and interior of case for maximum strength (ATA 300). All hardware is recessed for wearability and shipping purposes. Comes with combination lock, spring loaded handle, and security type bolts. Deluxe literature pocket in lid and two molded pallets. Foam in bottom of case for meters. "SAFETY" YELLOW COLOR CAN BE ORDERED AS #747TY.	\$325.00

(TOOLS ARE NOT INCLUDED)

WELLER PROFESSIONAL SOLDERING TOOLS

MODEL 8200 DUAL HEAT SOLDERING GUN

Two trigger positions provide instant switching to high (140 watts) or low (100 watts) heat. Tip heats instantly and spotlight comes on when trigger is pulled. UL Listed. Available with 2-wire (Model 8200) or 3-wire (Model 8200-3) cord.

MODEL 8200PK DUAL HEAT SOLDERING GUN KIT

Includes Weller dual heat 100/140 watt gun, rugged plastic utility case, three soldering tips, tip-changing wrench, flux brush, soldering aid and solder.

SERIES "D" DUAL-HEAT PROFESSIONAL GUNS

Exclusive dual-heat feature saves time, adds convenience, and greatly increases tip life. Triggematic control switches instantly to high or low heat as the job requires. Tip life is increased by using high heat only when necessary. No wasted time or current. Twin spotlights eliminate shadows on work. Carefully engineered design provides long reach; handles difficult jobs with ease; slips between wiring without damage to insulation. Exclusive tip grip assures full constant heat; wiping action of tip-fastened nut eliminates contact resistance and oxidation. Rated 200/260 watts. UL listed. Available with 2-wire (Model D550) or 3-wire (Model D550-3) cord.

MODEL D550PK HEAVY-DUTY HEAT SOLDERING GUN KIT

Features 240/325 watt dual heat gun, break-proof plastic carrying case, soldering, smoothing and cutting tips, tip-changing wrench and solder.

SOLDERING GUN AND KITS

Weller No.	Rating Watts	Price Each	Weller No.	Rating Watts	Price Each
8200	100/140	\$39.10	D550	200/260	\$53.10
8200-3	100/140	43.36	D550-3	200/260	57.50
8200PK	100/140	45.54	D550PK	200/260	61.80

SOLDERING GUN REPLACEMENT TIPS

Weller No.	For Gun or Iron No.	Tip Type	Price Each	Weller No.	For Gun or Iron No.	Tip Type	Price Each
8125	8100B, 8200	Solder	\$4.46	7135N†	8100, 8100B, 8200, D-440	Solder	\$4.46
8125N‡	8100B, 8200	Solder	4.46	6120†	8100B, 8200, D-440	Smoothing	4.46
7250	8250A, D-550	Solder	4.46	6110†	8100B, 8200, D-440	Cutting	4.46
7250N†	8250A, D-550	Solder	4.46	6130†	8250A, D-550	Cutting	4.46
7135	8100, D-440	Solder	4.46	6140†	WS-200, WD-250 S-500, D-550	Smoothing	4.46

†With tip nuts. ‡Premium plated: with tip nuts.

PROFESSIONAL SOLDERING IRONS

Professional soldering irons with interchangeable heating elements. A single handle plus three different elements effectively gives you three irons to handle different jobs. All irons come with a three wire cord.

Weller No.	Product Description	Price Each
WP25*	Professional 25 watt Soldering Iron	\$37.06
WP30*	Professional 30 watt Soldering Iron	40.02
WP35*	Professional 35 watt Soldering Iron	46.62
HE25*	Replacement Heater for 25 Watt Iron	17.26
HE30*	Replacement Heater for 30 Watt Iron	21.00
HE35*	Replacement Heater for 35 Watt Iron	23.10

*Also available in 220V — add suffix "D" to catalog number.

Weller No. PH60 Soldering Tool Stand with Sponge— For WP25, WP30, WP35

Price Each \$21.70

REPLACEMENT TIPS FOR WP25 AND WP40

Weller No.	Tip Description	Price Each	Weller No.	Tip Description	Price Each
ST1	1/16" screwdriver	\$5.74	ST5	1/32" single flat	\$5.74
ST2	3/32" screwdriver	5.74	ST6	1/32" screwdriver	5.74
ST3	1/8" screwdriver	5.74	ST7	1/32" conical	5.74
ST4	3/16" screwdriver	5.74	ST8	1/16" screwdriver	5.74

PROFESSIONAL DESOLDERING/RESOLDERING TOOL

A must for servicing modern printed circuit boards and solid state equipment. Complete with .063" opening tip. 120 volts; rated 40 watts. Two-wire cord.

Weller No. DS40 Desoldering Tool—Price Each \$87.62

Weller No. DSH40 Head Assembly with DSF Tip. Price Each \$39.40

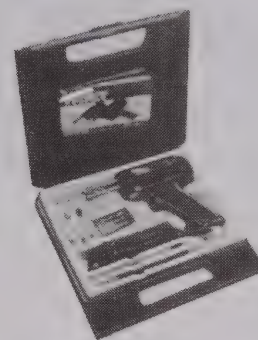
REPLACEMENT DESOLDERING TIPS FOR DS40

Weller No.	Hole Dia., In.	Price Each	Weller No.	Hole Dia., In.	Price Each
DST1	.038	\$5.72	DST4	.063	\$5.72
DST2	.046	5.72	DST5	.078	5.72
DST3	.059	5.72	DST6	.090	5.72

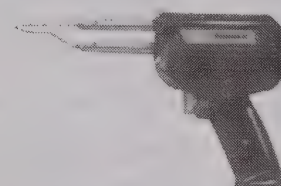
WELLER® SOLDERING IRONS ARE AVAILABLE WITH 3-WIRE CORDS.



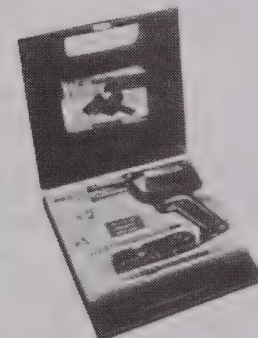
8200



8200PK



D550



D550PK



WP25



DS-40

WELLER® PROFESSIONAL SOLDERING TOOLS

"MARKSMAN"® SOLDERING IRONS



High efficiency irons with stainless steel barrels; heat and impact resistant handles. For 120 V. Complete with replaceable copper plated tip and instruction booklet packed in a vinyl pouch. UL Recognized.

Weller No.	Watts	Type	Tip	Overall Length	Wt., Oz.	Price Each
SP23	25	Pencil	MT-1, cone	8 1/4"	1 3/4	\$14.04
SP40	40	Pencil	MT-10, 1/4" dia.	8 1/4"	2	18.66
SP80	80	Med. duty	MT-20, 3/8" dia.	9 3/4"	4	30.02
SP120	120	Med. duty	MT-30, 1/2" dia.	11 3/4"	10	52.76
SP175	175	Hvy. duty	MT-40, 5/8" dia.	12 1/2"	16	64.26
SP23K	With SP-23 iron, 3 tips, 5" rosin core solder and aid tool with instructions					19.66

PLATED REPLACEMENT TIPS FOR "MARKSMAN" IRONS

Pkg. of 2 tips, except MT-20 to MT-40, pkg. of 1.

Weller No.	For Marksman Iron	Tip Type	Price Each
MT1	SP23	1/8" cone shaped	\$ 4.08
MT2	SP23	1/8" screwdriver	4.08
MT3	SP23	1/8" chisel	4.08
MT5	SP23	1/8" woodburning	4.08
MT6	SP23	1/8" smoothing	4.08
MT7	SP23	Macrame	4.08
MT8	SP23	1/8" woodburning	4.08
MT9	SP23	1/8" woodburning	4.08
MT10	SP40	1/4" chisel	7.46
MT70	SP12	1/8" cone shaped	4.08
MTG20*	SPG80	3/8" chisel	7.46
MTG21*	SPG80	1/2" chisel	7.46
MTG22*	SPG80	3/8" cone shaped	8.32
MTG30	SP120	1/2" chisel	10.64
MTG40	SP175	5/8" chisel	18.18
HK11	SP23	1/4" blade and chuck	6.96

* Bulk packed

AC/FIELD SERVICE SOLDERING PENCIL

Field service soldering pencil operates from AC or DC. Two modes available. **Ratings: Model TCP12P**—12-14 Volts AC/DC 2.5-2.9 amps, 30-41 watts; **Model TCP24P**—24-28 volts AC/DC, 1.7-2.0 amps, 41-56 watts. Units come complete with #PTD7 700°F, 3/16" screwdriver tip and 12-ft. power with battery clips.

Weller Model TCP12P—Soldering pencil. Price Each..... \$103.30

Weller Model TCP24P—Soldering pencil. Price Each..... \$103.30

DESOLDER AND SOLDER STATION

Power vacuum desoldering station designed for PC board repair. Closed loop temperature control protects sensitive components. See-thru solder collector is easy to clean or replace. Nonburnable cord for safety and long life. High impact resistant tool handles and stainless steel barrels. Operates from factory air and line voltage. Complete with foot switch, including light on-off switch, twin safety tool holder, vacuum adjustment and gauge, tip and sponge holder, five assorted tips and instruction manual.

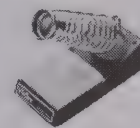
Weller No.	Description	Pkg. Qty.	Price Each
DS100	Complete desoldering/soldering station, 120 VAC, 50/60 Hz	1	\$1103.14
DS101P	Soldering iron with PTA7 tip	1	104.12
DS102P	Desoldering iron with 700°F (370°C) head.	5	156.46
DS103	Collector tube with gasket and filter	5	9.28
DS104	Clean-out tool	1	9.28
DS105	Sponge holder with spring and clean-out tool	1	31.56
DS106	Sponges only	10	2.06
DS107	Tool holder	1	122.26
DS201	Fuse, 5 per box	5	3.22
DS203	Fuse, 3 1/4 A type N, 5 per card	5	1.90
DS204	Filter	10	1.74
DS205	In-line filter	10	7.56
DS217	Desoldering head, 700°F (370°C)	1	79.08
DS218	Desoldering head, 800°F (427°C)	1	79.08
SW60	Switch assembly	1	26.48
HE60	Heating element	1	23.72

REPLACEMENT TIPS FOR SOLDER AND DESOLDER STATION

Weller No.	Size*, Inches	Price Each	Weller No.	Size*, Inches	Price Each
DS110	.060 x .025 x .50	\$14.40	DS114	.125 x .071 x .50	\$14.40
DS111*	.090 x .025 x .50	14.40	DS115	.060 x .025 x .75	14.40
DS112*	.076 x .036 x .50	14.40	DS116	.098 x .045 x .75	14.40
DS113*	.098 x .045 x .50	14.40	DS117	.090 x .025 x .75	14.40

*O.D. X I.D. X Length: all tips packed 5 per card.

SOLDERING TOOL STANDS



Bench Stand



Side Rail Stand

Weller No. PH60—Bench type with base and sponge for W60P, WP25P, WP40P, and irons with barrel dia. up to 1 1/2". Price Each \$21.70

Weller No. PH100—Bench type with sponge for W100PG and irons with barrel diameter up to 1 1/2". Price Each \$24.44

Weller No. SFA60—Side rail type for W60P and irons with barrel dia. up to 1 1/2". Attach to wall or bench. Price Each \$8.20

Weller No. SFA100—Side rail type for W100PG and irons with barrel dia. up to 1 1/2". Attach to wall or bench. Price Each \$13.76

INDUSTRIAL DESOLDERING ADAPTERS



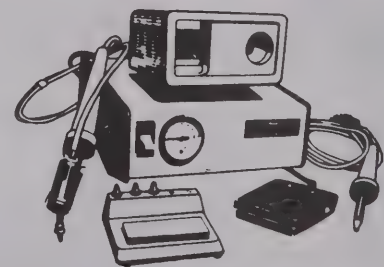
DS-TCP

Weller No. DSTCP—For use with TC201.

Price Each \$36.98

Weller No. DS60—For use with W60.

Price Each \$36.98



DS100



DS110



DS115

WELLER® PROFESSIONAL SOLDERING TOOLS

REPLACEMENT PARTS FOR MODELS WTCPN, WTCPL, TCP-12 AND TCP-24

Weller No.	Description	Price Each
TCP1P	Replacement soldering pencil with PTA7 tip for WTCPL	\$91.48
SW60	Switch assembly for TCP-1 and TCP-12	26.48
HE60	Heating element	23.72
BA60	Barrel nut assembly for TCP-1 and TCP-12	5.84
FP1	Fuse for PU1, PU1A, PU2 and WTCP2	5.40
LN2	Lamp assembly for WTCPL and PU2	7.84
PUS	Switch for PU2	7.84

TEMPERATURE-CONTROLLED DESOLDERING STATION

Stainless steel lined desoldering tips draw molten solder into see-through collecting tube which is easily cleaned and replaced. Collector tube filter prevents solder from entering and clogging vacuum tube. Vacuum is created by conversion of air pressure through a special transducer; vacuum adjustable from 5" to 20" Hg. A foot switch turns vacuum on and off. Cabinet-mounted gauge shows vacuum level. Station is designed to use factory air. Lighted on-off power switch. Quick-connect locking plug prevents accidental loss of power. Available in 700°F and 800°F versions. • Meets MIL-SPEC-DOD-2000-1 • Zero voltage circuit eliminates switching transients on the desoldering iron tiplet.

Weller No. DS500E Desoldering Station—Price Each \$924.86

ACCESSORIES FOR DS500E

Weller No.	Description	Price Each
DS102P	Desoldering iron with 700°F (370 °C) head	\$156.46
DS103	Collector tube with gasket and filler	9.28
DS104	Clean-out tool	9.28
DS105	Sponge holder with spring and clean-out tool	31.56
DS106	Sponges only (Pkg. of 10)	2.06
DS107	Tool holder	122.26

CONTROLLED OUTPUT INDUSTRIAL SOLDERING IRONS

Sensing device at tip assures reliable soldering; won't overheat; maintains selected maximum temperature. Two-wire cord. With 700°F tips. "Temperature Sensing" tips are available in standard industrial configurations at 600°, 700° and 800°F; see listings below. Models W60 and W100 have new blue color.

Weller No.	Watts	Type	Tip	Overall Length	Wt., Oz.	Price Each
W60P	60	Pencil	1/4" Screwdriver	7 1/4"	2 1/2"	\$71.16
W100PG	100	Pencil	3/8" Screwdriver	8 1/4"	3 1/2"	69.86
W60P-3	Same as W60P but with 3-wire cord					77.30
W100P-3	Same as W100PG but with 3-wire cord					84.98

PREMIUM PLATED REPLACEMENT TIPS FOR W60P SOLDERING IRON

For Model W60 blue series tools only.

Point Size	Description	Reach	Weller Number			Price Each
			600°F	700°F	800°F	
1/16"	Screwdriver	1 1/32"	CT5A6	CT5A7	CT5A8	\$7.26
3/32"	Screwdriver	1 1/32"	CT5B6	CT5B7	CT5B8	7.26
1/8"	Screwdriver	1 1/32"	CT5C6	CT5C7	CT5C8	7.26
3/16"	Screwdriver	1 1/32"	CT5D6	CT5D7	CT5D8	7.26
1/4"	Screwdriver	1 1/32"	CT5E6	CT5E7	CT5E8	7.26

PREMIUM PLATED REPLACEMENT TIPS FOR W100P SOLDERING IRON

For Model W100 blue series tools only.

Point Size	Description	Reach	CT6C6	CT6C7	CT6C8	Price Each
1/8"	Screwdriver	1 1/32"	CT6C6	CT6C7	CT6C8	\$10.40
3/16"	Screwdriver	1 1/32"	CT6D6	CT6D7	CT6D8	10.40
1/4"	Screwdriver	1 1/32"	CT6E6	CT6E7	CT6E8	10.40
3/8"	Screwdriver	1 1/32"	CT6F6	CT6F7	CT6F8	10.40

SP12 MINI IRON (12 WATTS)

Lightweight, pencil-thin iron is ideal for fine soldering and hobby work, 7" long, less tip, can be used for small, intricate jobs such as electronics kits, model railways and jewelry making. Weighs 3.5 oz.

Weller No. SP12 Mini Iron—Price Each \$14.40



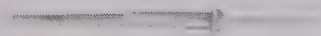
DS500E



W60P



W100PG



SP12

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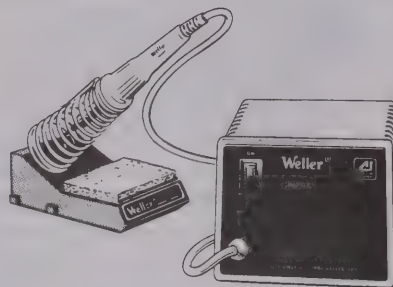
**PRICES SHOWN ARE FOR REFERENCE ONLY. PLEASE CALL
US FOR CURRENT QUOTES.**

WELLER® PROFESSIONAL SOLDERING TOOLS

WTCPT CONTROLLED OUTPUT SOLDERING STATION

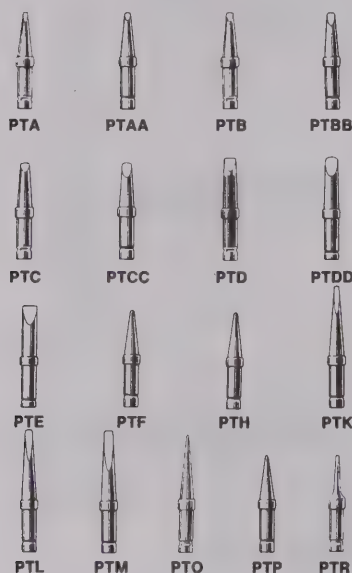
- Compact, remote operator comfort and convenience
- Self-feeding water reservoir
- Exclusive closed loop transformer
- Pencil stand connects to right or left of station
- Storage for 6 temperature-sensing tips

The compact, sleek WTCPT design allows the lightweight pencil iron to be used several feet away from the main unit. The self-feeding reservoir stand can also be attached directly to either side of the main unit for easy use by a right or left hander. This detachable stand also has storage space for six extra temperature sensing tips. Impact resistant plastic protects the exclusive closed-loop transformer and the flexible, iron end-casing relieves cord strain for extra durability.



Weller No.	Description	Price Each
WTCPT	Soldering Station, 120 VAC	\$159.16
WTCPTD	Soldering Station, 220 240 VAC	159.16
PU120T	Power Unit for WTCPT (120 V)	121.68
PU240T	Power Unit for WTCPTD	121.68

REPLACEMENT TIPS FOR WTCPT, WTCPS, WTCPN, WTCPL, TCP12, WTCPR



Tip Description	Weller Number			Price Each
	600°F	700°F	800°F	
1/16" screwdriver	PTA6	PTA7	PTA8	\$6.48
1/16" single flat	PTAA6	PTAA7	PTAA8	6.48
3/32" screwdriver	PTB6	PTB7	PTB8	6.48
3/32" single flat	PTBB6	PTBB7	PTBB8	6.48
1/8" screwdriver	PTC6	PTC7	PTC8	6.48
1/8" single flat	PTCC6	PTCC7	PTCC8	6.48
3/16" screwdriver	PTD6	PTD7	PTD8	6.48
3/16" single flat	PTDD6	PTDD7	PTDD8	6.48
1/32" screwdriver	PTH6	PTH7	PTH8	6.48
1/32" conical	PTP6	PTP7	PTP8	6.48
1/32" single flat	PTF6	PTF7	PTF8	6.48
15/64" screwdriver	PTK6	PTK7	PTK8	6.48
3/64" long screwdriver	PTL6	PTL7	PTL8	6.48
5/64" long screwdriver	PTM6	PTM7	PTM8	6.48
1/8" long screwdriver	PTO6	PTO7	PTO8	6.48
1/32" long conical	PTR6	PTR7	PTR8	6.48
1/16" narrow screwdriver	PTS6	PTS7	PTS8	6.48
1/64" long conical				

REPLACEMENT PARTS

Weller No.	Description	Price Each
TC201T	Soldering pencil with PTA7 tip	\$83.10
EC234	Heater assembly (24 V), plug-in type	16.04
SW60	Switch assembly for soldering pencil	26.48
TC212	Cord set with plug	21.44
BA60	Barrel nut assembly	5.84
PH1201ESD	Iron stand	23.08
TC204	Iron holder with funnel	6.08
EC205	Sponge (pkg. of 5)	1.96
EC232	Handle assembly for TC201P	5.06
PL120	Replacement plug receptacle	8.40
SW120	Switch Light power unit (WTCPT)	14.28
SW240	Switch Light power unit (WTCPTD)	20.06
TR227	Power transformer, 120 VAC	35.40
TR228	Power transformer, 240 VAC	35.40

WELLER® IS A REGISTERED TRADEMARK OF COOPER INDUSTRIES, INC.

WE CAN SUPPLY ALL YOUR REQUIREMENTS FOR INDUSTRIAL ELECTRONIC EQUIPMENT AND PARTS. WE OFFER A COMPLETE LINE WITH UP-TO-DATE STOCK, FAST DELIVERY AND PRODUCTION QUANTITY PRICING. CALL FOR INFORMATION ON NEW OR UNLISTED ITEMS.

WELLER® PROFESSIONAL SOLDERING TOOLS

WELLER® CORDLESS PYROPEN®



WSTA3



WPT-1



WPT-6



WPT-11



WPT-2



WPT-7



WPT-12



WPT-3



WPT-8



WPT-13



WPT-4



WPT-9



WPT-14



WPT-5



WPT-10



WHC-50



WHC-51



WHC-52



WHC-53



WPA2

WPA2 SELF-IGNITING PYROPEN®

Ignites with a push of a button. Lightweight and portable, the WPA2 features Weller's reliable temperature control and fast heat-up time. Ideal for service jobs, contains enough butane gas for 3 hours and can be recharged with regular butane gas. Operation manual included. **Temperature Range** -482°F — 932°F (250°C — 500°C) (Temperatures are approximate.)

Cat. No.	N/S No.	Description	Price Each
WPA-2	59043	Cordless Soldering Iron Self-igniting	\$120.26

- Lightweight completely portable—Runs on butane gas for 3 hours of operation.
- Ready to solder in 30 seconds.
- Temperature controlled from 392°F-932°F (200°C-500°C)
- 14 tip combinations available
- Inactive hot air nozzles for low temperature heat

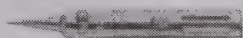
The Weller® Pyropen® weighs only 3.2 ozs. 90g and its handy design is similar to the classic Weller low voltage irons. But the Weller Pyropen® is operated with butane gas and has been developed mainly for field and service jobs: the Pyropen® requires no power cord or batteries, and is electrically completely neutral (no parasitics or peaks). The reservoir in the handle of the soldering pencil contains up to 1.68 cins 27.5 ccm of butane gas (same as lighter gas) which is sufficient for 3-4 hours soldering operation. Unlike Ni-battery operated soldering irons, the Weller Pyropen® demands only seconds for recharge. The WSTA3 Pyropen® comes complete with standard "Longlife" soldering tip, hot air tip, torch ejector, spanner tool support clip, cleaning sponge and operation manual.

Cat. No.	N/S No.	Description	Price Each
WSTA3	47228	Cordless Pyropen	\$110.06
WP70S	47229	Solder Ejector	16.94
WP71T	47230	Torch Ejector	16.94
WAS	47231	Accessory Spanner	3.20
WP72M	47232	Set of Tip Housings and Cap Screw	5.74
WP73TC	47233	Tip Cleaner with Metal Box	4.54
WP74H	47234	String Holder	5.18
WP75B	47235	Metal Box for Tool	15.58
WP76HL	47239	Handle Only	87.24
WPT-1	47240	Soldering Tip	12.44
WPT-2	47242	Soldering Tip	12.44
WPT-3	47244	Soldering Tip	12.44
WPT-4	47245	Soldering Tip	12.44
WPT-5	47248	Soldering Tip	12.44
WPT-6	47249	Soldering Tip	12.44
WPT-7	47252	Soldering Tip	12.44
WPT-8	47253	Soldering Tip	12.44
WPT-9	47254	Soldering Tip	12.44
WPT-10	47255	Soldering Tip	12.44
WPT-11	47259	Soldering Tip	14.96
WPT-12	47270	Soldering Tip	14.96
WPT-13	47278	Soldering Tip	14.96
WPT-14	47281	Multi-purpose Catalyst	14.96
WHC-50	47282	Hot Blow Tip	14.96
WHC-51	47299	Hot Air Tip	12.44
WHC-52	47340	Hot Air Tip	12.44
WHC-53	47359	Hot Air Tip	12.44

ACCESSORIES FOR WPA2

Cat No.	N/S No.	Description	Price Each
WPA-PC	59044	Cap	\$ 6.82
WPA-B	59046	Burner	18.94
WPA-E	59045	Ejector	10.00
WPA-CN	59048	Cap Nut	12.76

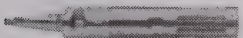
WELLER® CORDLESS PYROPEN® JR



Tapered Needle Soldering Tip (0.5 mm)



Hot air tip (1.5 mm)



Chisel point soldering tip (3.0 mm)



Hot air tip (4.9 mm)

Spade Point Soldering Tip (3.0mm)

- Mini iron soldering everywhere with temperature control.
- Dual function soldering iron and brazing torch.
- Lightweight, portable. Carry it in your pocket.
- "Longlife" tips last 10 times longer than conventional tips.
- Quick refills with butane gas.
- Functional aluminum body and cap stay cool; won't melt. Now perform remote soldering and brazing with the advanced versatility of the Weller® Cordless Pyropen® Jr. Recharges in seconds. Easy-to-handle, butane gas operated soldering pen requires no

power cord or batteries, and is electrically completely neutral (no peaks). "Longlife" soldering tips deliver quick heat-up time. Temperature-controlled soldering iron from 392°F-482°F (200°C-450°C); hotblow feature. 806°F 430°C max.; torch feature. 2372°F 1300°C max. All temperatures are approximate.

Cat. No.	N/S No.	Description	Price Each
WST2	47751	Cordless Soldering Iron	\$88.36

ACCESSORIES

WP71-02	47791	Cap	\$11.92
WP71-04	47792	Burner	3.88
WP71-07	47793	Ejector	15.96
WP71-14	47794	Cap Nut	2.80
WP71-15	47795	Burner	3.60
WP71-27	47796	Shutter Spring	1.80
WP71-28	47800	Air Shutter	3.60

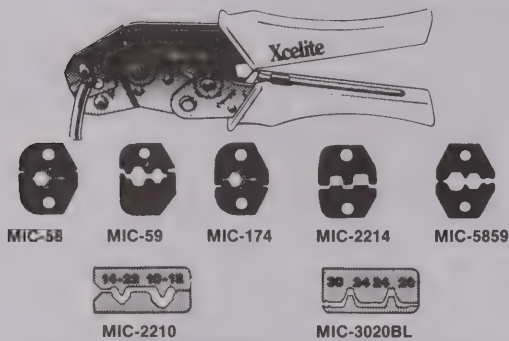
SOLDERING TIPS

WPT-15	47752	Tapered Needle (0.5 mm)	\$12.44
WPT-16	47753	Chisel Point (3.0 mm)	12.44
WPT-17	47754	Spade Point (3.0 mm)	12.44
WHC-54	47755	Hot Air Tip (1.5 mm)	15.38
WHC-55	47756	Hot Air Tip (4.9 mm)	11.46

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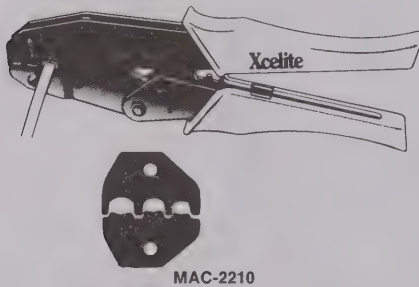
XCELITE® HAND TOOLS

MINI-CRIMPER



Xcelite No.	Application	Price Each
MIC-59	RG59 BNC/TNC connectors	\$137.88
MIC-5859	RG58/59 BNC/TNC connectors	155.80
D-5859	Die Set for MIC-5859	137.88
MIC-174	RG174 BNC/TNC connectors	137.88
MIC-2214	Insulated terminals, AWG 22-14	108.26
D-2214	Die Set for MIC-2214	78.48
MIC-2210	Non-insulated terminals and splices, AWG 22-10	155.80
MIC-3020BL	D-subminiature open barrel contacts, AWG 30-20	155.80

MAXI-CRIMPER



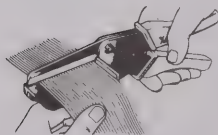
Built bigger for greater terminating power. This professional tool with straight jaws has the same guaranteed crimp and ratchet features as the Mini-Crimper above. Handle spread at the gripping point is 4.02".

Xcelite No. MAC-2210 Maxi-Crimper—For insulated terminals from AWG 22 to AWG 10.
 Price Each \$115.66

Xcelite No. D-2210 Die Set for MAC-2210 Crimping Tool—
 Price Each \$78.48

Xcelite No. D-8281 Die Set for MAC-8281 Crimping Tool—
 Price Each \$93.88

FLAT CABLE CUTTER



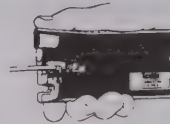
Flat cable cutting tool gives an even, undistorted cut across all conductors, up to 64 positions. A built-in guide assures a square cut. The only flat cable cutter with a single-piece, solid blade, and an aluminum inlay in the anvil for increased durability, accuracy and power. Powerful enough to cut under-carpet electrical cable up to 4 positions.

Xcelite No. 64-FCC Flat Cable Cutter—
 Price Each \$134.28

Xcelite No. 64-ANV Anvil for 64-FCC Flat Cable Cutter—
 Price Each \$21.94

Xcelite No. 64-BLD Cutting Blade for 64-FCC—
 Price Each \$38.38

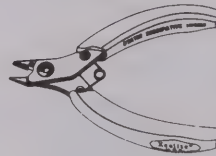
SELF-ADJUSTING WIRE STRIPPER



Pocket size wire stripper built for comfort. Body of tough fiberglass-reinforced nylon. Mechanics of corrosion-protected steel. Tool strips wire from AGW 28 to AWG 12. Also cuts stranded wire from AWG 28 thru AWG 10, and solid wire from AWG 28 thru AWG 16.

Xcelite No. SAS-2812 Self-Adjusting Wire Stripper—
 Price Each \$75.82

STAINLESS DIAGONAL CUTTING PLIERS WITH STATIC DISSIPATIVE SLEEVES

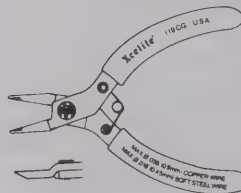


Made of BENSTAT®, this new sleeve is a completely new approach to static-safe material for the control of electrical discharge damage to sensitive components. BENSTAT qualifies as a "static dissipative" per DOD STD 1686 and DOD Handbook 263. This material contains no carbon elements or other agents that particulate or slough, making these pliers acceptable for clean room application.

Xcelite No.	Length (In.)	Price Each
112CG	4	\$53.54
113CG	4½	54.58
114CG	4½	54.58
115CG	5	54.86
116CG	5	54.86
117CG	4	54.34

BENSTAT® is a registered trademark of Bengal, Inc.

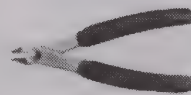
STAINLESS STEEL PLIERS



The 119CG Stainless Steel Plier has a 45 degree angle cutting tip which enables users to make a clean cut in confined spaces. Incorporates non-slip cushion foam grips and specially treated stainless steel. The 4½" plier will cut copper wire up to .035" or soft steel wire up to .018"

Xcelite No.	Price Each
119CG	\$57.86

ELECTRONIC SHEARS



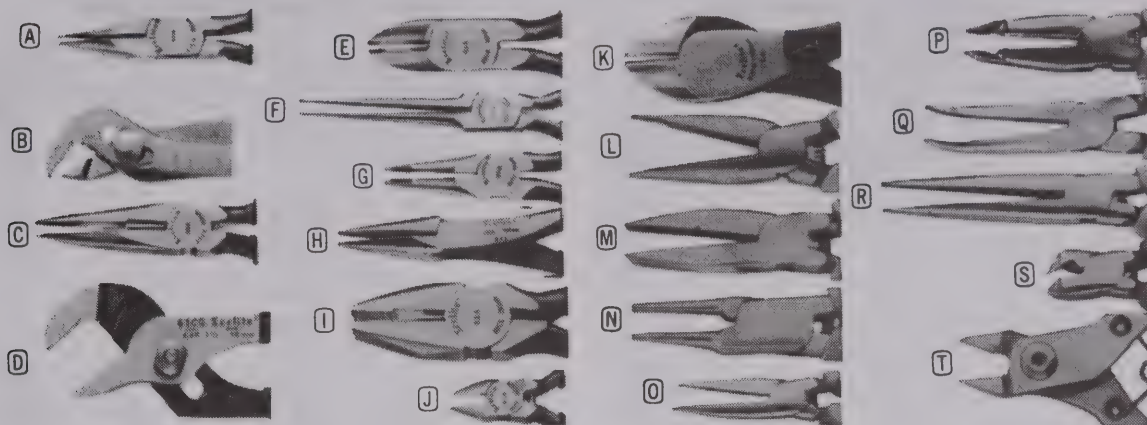
5" professional quality shears with cushion-grip handles for wire up to 14 AWG. Easy access to tight work areas. 97CG is identical to 96CF but includes special "Klip-Grip" which holds cut-off wires.

Xcelite No.	Application	Price Each
96CG	5" Electronic shears	\$ 9.56
97CG	5" Electronic shears w/Klip-Grip	10.48

**OUR PRICES ARE COMPETITIVE
 DUE TO OUR ASSOCIATION WITH
 A NATIONAL BUYING GROUP.**

XCELITE® IS A REGISTERED TRADEMARK OF COOPER INDUSTRIES INC.

XCELITE® HAND TOOLS



ELECTRONIC PLIERS

Xcelite No.	Jaw illus.	Description	Price Each
41CG	A	4" midjet pliers, serrated jaws, without side cutters	\$16.82
50CG	B	5" slip-joint ignition pliers with narrow jaws, 1/2" opening	15.68
51CG	C	6" long nose pliers without side cutters	19.38
52CG	C	6" long nose pliers without side cutters	15.70
53CG	D	7" tongue and groove pliers, serrated jaws, 1 1/4" opening	12.68
54CG	E	4" midjet diagonal pliers for close work	18.26
55CG	E	5" diagonal pliers	18.66
56CG	F	6" needle nose pliers	20.48
57CG	F	5 1/2" needle nose pliers with spring and serrated jaws	20.26
58CG	G	6" radio and TV pliers	23.70
59CG	H	8" chain-nose electrician's pliers with long reach and high leverage	24.02
60CG	I	6" side-cutting pliers with serrated jaws	20.26
63CG	D	10" tongue and groove pliers with serrated jaws, 1 1/2" opening	16.20
64CG	J	4" midjet diagonal pliers	23.18
66CG	E	6" all-purpose diagonal pliers	19.56
67CG	K	7" heavy-duty diagonal pliers	19.16
68CG	I	8" side-cutting pliers with serrated jaws	25.12

BLUE CUSHION-GRIP & BLUE CUSHIONED FOAM HANDLES

All pliers have coil spring openers and polished head.

69CG	L	5" cutting pliers for #22 AWG and smaller wire	\$25.32
70CG	M	4 1/2" short flat-nose pliers for gripping	18.54
71CG	N	4 1/2" round-nose pliers for wire looping	19.46
72CG	O	4 1/2" chain-nose pliers for subminiature assembly	19.40
73CG	P	4 1/2" short nose tip-cutting for #22 AWG and smaller soft wire	30.86
74CG	J	4" semi-flush-cutting taper-nose pliers for #22 AWG and smaller soft wire	24.26
77CG	O	4 1/2" chain-nose pliers with serrated jaws	19.40
79CG	Q	5" thin bent-nose pliers with serrated jaws	26.68
81CG	C	5 1/2" long chain-nose pliers with side cutter	21.46
82CG	C	5 1/2" long chain-nose pliers without side cutter	18.64
84CG	J	4" flush-cutting diagonal pliers with tapered nose for #22 AWG and smaller soft wire	25.98
87CG	R	5 1/2" fine needle-nose pliers with serrated jaws	21.10
90CG	R	4 1/2" fine needle-nose pliers	23.84
91CG	R	6" extra thin needle-nose pliers with serrated jaws	21.88
92CG	L	4 1/2" tip-cutting pliers for #22 AWG and smaller soft wire	24.90
94CG	G	6" tip-cutting pliers with cutter near tip	25.18
95CG	J	5" semi-flush cutting pliers for #18 AWG and smaller soft wire	24.58
98CG	E	4" diagonal pliers for #18 AWG and smaller soft wire	19.98
106CG	E	4 1/2" diagonal pliers	20.14
107CG	E	5" diagonal pliers	20.08
108CG	J	4 1/2" flush-cutting diagonal pliers for #20 AWG and smaller soft wire	27.52
109CG	J	4" diagonal pliers for #22 AWG and smaller soft wire	28.44
111CG	S	4" angled flush-cutting pliers for #22 AWG and smaller soft wire	32.98
112CG	T	4" stainless flush-cutting diagonal pliers #20 AWG and smaller non-ferrous wire and #25 AWG and smaller soft steel wire	54.34
113CG	T	4 1/2" stainless cutter	54.58
114CG	T	4 1/2" stainless cutter	54.58
115CG	T	5" stainless cutter	54.86
116CG	T	5" stainless cutter	54.86
117CG	T	4" stainless cutter	54.34
162CG	O	4" short chain nose pliers	18.50

REPLACEMENT SLEEVE HANDLES

Made of blue PVC Plastisol foam with a textured anti-slip cushion surface.

Xcelite No.	For Use With	Price Each
XLS-1	110CG, 112CG, 162CG	\$3.52
XLS-2	65CG, 69CG, 70CG, 71CG, 72CG, 73CG, 74CG, 77CG, 79CG, 81CG, 82CG, 84CG, 87CG, 90CG, 91CG, 92CG, 98CG, 109CG, 111CG, 113CG, 114CG, 115CG, 116CG	3.52
XLS-3	95CG, 106CG, 107CG, 108CG	3.52
XLS-4	94CG	3.52

XCELITE® IS A REGISTERED TRADEMARK OF COOPER INDUSTRIES INC.

XCELITE® HAND TOOLS

ROUND BLADE SCREWDRIVERS (FOR SLOTTED SCREWS)



Blades forged from tough AISI 6150 chrome vanadium steel. Shockproof, breakproof, amber plastic handles.

Xcelite No.	Blade	Handle	Overall	Price Each
POCKET CLIP STYLE				
R3322	3/32" x 2"	2 1/4"	4 1/4"	\$ 2.18
R3323	3/32" x 3"	2 1/4"	5 1/4"	2.42
R3324	3/32" x 4"	2 1/4"	6 1/4"	2.60
R181	1/8" x 2"	2 1/4"	4 1/4"	2.12
R183	1/8" x 3"	2 1/4"	5 1/4"	2.60

REGULAR STYLE				
R182	1/8" x 2"	2 5/8"	4 5/8"	\$ 2.60
R184	1/8" x 4"	2 5/8"	6 5/8"	3.34
R186	1/8" x 6"	2 5/8"	8 5/8"	3.62
R188	1/8" x 8"	2 5/8"	10 5/8"	3.92
R1810	1/8" x 10"	2 5/8"	12 5/8"	4.28
R5323	5/32" x 3"	2 5/8"	5 5/8"	3.16
R5324	5/32" x 4"	2 5/8"	6 5/8"	3.16
R5325	5/32" x 5"	2 5/8"	7 5/8"	3.46
R5328	5/32" x 8"	2 5/8"	10 5/8"	4.28
R3163	3/16" x 3"	3 3/8"	6 3/8"	4.22
R3164	3/16" x 4"	3 3/8"	7 3/8"	4.56
R3166	3/16" x 6"	3 3/8"	9 3/8"	5.28
R3168	3/16" x 8"	3 3/8"	11 3/8"	5.70
R31610	3/16" x 10"	3 3/8"	13 3/8"	6.54
R144	1/4" x 4"	4 1/8"	8 1/8"	5.58
R146	1/4" x 6"	4 1/8"	10 1/8"	6.24
R148	1/4" x 8"	4 1/8"	12 1/8"	6.78
R1410	1/4" x 10"	4 1/8"	14 1/8"	7.14
R5164	5/16" x 4"	4 1/2"	8 1/2"	6.62
R5166	5/16" x 6"	4 1/2"	10 1/2"	6.88
R5168	5/16" x 8"	4 1/2"	12 1/2"	7.62
R388	3/8" x 8"	4 1/2"	12 1/2"	9.06

SQUARE BLADE SCREWDRIVERS (FOR SLOTTED SCREWS)

Xcelite No.	Blade	Handle	Overall	Price Each
STUBBY STYLE				
S3161	3/16" x 1 1/4"	1 1/2"	2 3/4"	\$ 3.46
S141	1/4" x 1 1/4"	2"	3 1/4"	4.72
S5161	5/16" x 1 1/4"	2"	3 3/4"	3.92

REGULAR STYLE				
S3163	3/16" x 3"	3 3/8"	6 3/8"	\$ 4.42
S3164	3/16" x 4"	3 3/8"	7 3/8"	4.94
S3166	3/16" x 6"	3 3/8"	9 3/8"	5.44
S3168	3/16" x 8"	3 3/8"	11 3/8"	6.24
S144	1/4" x 4"	4 1/8"	8 1/8"	6.54
S146	1/4" x 6"	4 1/8"	10 1/8"	6.80
S148	1/4" x 8"	4 1/8"	12 1/8"	7.14
S5164	5/16" x 4"	4 1/2"	8 1/2"	6.62
S5166	5/16" x 6"	4 1/2"	10 1/2"	8.88
S5168	5/16" x 8"	4 1/2"	12 1/2"	9.22
S51610	5/16" x 10"	4 1/2"	14 1/2"	9.78
S388	3/8" x 8"	4 1/2"	12 1/2"	9.82
S3812	3/8" x 12"	6"	18"	12.48
S71612	7/16" x 12"	6"	18"	17.00
S71618	7/16" x 18"	6"	24"	19.38

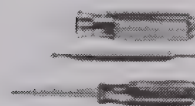
FOUR-IN-ONE SCREWDRIVER



Xcelite No. FSD-1V—Consists of stubby handle, 3/16" slotted tip, and No. 1 and 2 Phillips tips.

Price Each \$13.26

FOUR-IN-ONE SCREWDRIVER



Xcelite No. FSD-1—Consists of full-size handle, 3/16" and 1/4" slotted bits, and Nos. 1 and 2 Phillips bits.

Price Each \$13.26

PHILLIPS TYPE SCREWDRIVERS

Chrome vanadium steel blades. Precision points. Shockproof, breakproof, amber plastic handles.

Xcelite No.	Point	Blade	Handle	Overall	Price Each
POCKET CLIP STYLE					
P12S	#0	1/8" x 2"	2 1/4"	4 1/4"	\$ 2.82
STUBBY STYLE					
SX-101	#1	3/16" x 1 7/16"	2"	3 7/16"	\$ 4.64
SX-102	#2	1/8" x 1 1/4"	2 1/8"	3 3/8"	5.22
REGULAR STYLE					
X100	#0	1/8" x 2"	2 5/8"	4 5/8"	\$ 3.16
X101	#1	3/16" x 3"	3 3/8"	6 3/8"	4.20
X108	#1	3/16" x 6"	3 3/8"	9 3/8"	5.52
X102	#2	1/4" x 4"	4 1/8"	8 1/8"	5.62
X103	#3	5/16" x 6"	4 1/2"	10 1/2"	7.84
X104	#4	3/8" x 8"	4 1/2"	12 1/2"	10.200
EXTRA-LONG STYLE					
X1010	#1	3/16" x 10"	3 3/8"	13 3/8"	\$ 8.36
X1020	#2	1/4" x 10"	4 1/8"	14 1/8"	9.34

"SUPER-TRU" PHILLIPS SCREWDRIVERS

Precision made Phillips screwdrivers have "Super-Tru" tips for close fit, long wear, and reduced possibility of damage to screw head recesses, especially in small size fasteners. Bright nickel chrome blades with tips specially treated and black-oxide finished for ultimate dimensional control. Black plastic handles.

Xcelite No.	Point	Blade	Handle	Overall	Price Each
XST-100	#0	1/8" x 2"	2 5/8"	4 5/8"	\$3.98
XST-101	#1	3/16" x 3"	3 3/8"	6 3/8"	5.52
XST-102	#2	1/4" x 4"	4 1/8"	8 1/8"	7.04
XST-1010	#1	3/16" x 10"	3 3/8"	13 3/8"	8.36
XST-1020	#2	1/4" x 10"	4 1/8"	14 1/8"	9.34

FREARSON (REED & PRINCE) TYPE SCREWDRIVERS

Xcelite No.	Blade	Handle	Overall	Price Each
RP-101	3/16" x 3"	3 3/8"	6 3/8"	\$ 5.04
RP-102	1/4" x 4"	4 1/8"	8 1/8"	61.58

TORX® TYPE SCREWDRIVERS

*Trademark of Camcar Division of Textron, Inc.

Xcelite No.	Torx Size	Blade	Handle	Overall	Price Each
XTD-10	10	3/16" x 3"	3 3/8"	6 3/8"	\$4.78
XTD-15	15	3/16" x 3"	3 3/8"	6 3/8"	4.78
XTD-20	20	3/16" x 3"	3 3/8"	6 3/8"	4.78
XTD-25	25	3/16" x 3"	3 3/8"	6 3/8"	4.78
XTD-27	27	1/4" x 4 1/2"	4 1/8"	8 5/8"	5.30
XTD-30	30	1/4" x 4 1/2"	4 1/8"	8 5/8"	5.30

SCRULOX TYPE SCREWDRIVERS

Xcelite No.	Point Size	Color	Blade	Overall	Price Each
SL-0V	0	Amber	3 1/2"	7 5/8"	\$5.44
SL-1	1	Green	3 1/2"	7 5/8"	5.44
SL-2	2	Red	3 1/2"	7 5/8"	5.44
SL-3	3	Black	3 1/2"	7 5/8"	5.44
SL-2L	2	Red	5 1/8"	9 3/4"	5.86

CLUTCH HEAD TYPE SCREWDRIVERS

Furnished in Type "G" design with amber handle.

Xcelite No.	Tip Diam.	Blade	Handle	Overall	Price Each
G5324	5/32"	3/16" x 4"	3 3/8"	7 5/8"	\$6.18

XCELITE® IS A REGISTERED TRADEMARK OF COOPER INDUSTRIES, INC.

XCELITE® HAND TOOLS

ALLEN HEX TYPE SCREWDRIVERS

Alloy steel blades. Shockproof, breakproof, amber plastic handles.

Xcelite No.	Hex	Blade	Handle	Overall	Price Each
LN-20	.050"	4"	2 5/8"	6 3/4"	\$4.76
LN-21	1/16"	4"	2 5/8"	6 5/8"	4.76
LN-22	5/64"	4"	2 5/8"	6 5/8"	4.76
LN-23	3/32"	4"	3 1/8"	7 1/8"	4.76
LN-764	7/64"	4"	3 1/8"	7 1/8"	4.76
LN-24	1/8"	4"	3 1/8"	7 1/8"	5.10
LN-964	9/64"	4"	3 1/8"	7 1/8"	5.10
LN-25	5/32"	4"	5 1/8"	9 1/8"	5.10
LN-26	3/16"	6"	4 1/8"	10 1/8"	5.10
LN-27	7/32"	6"	4 1/8"	10 1/8"	5.70
LN-28	1/4"	6"	4 1/8"	10 1/8"	5.70

METRIC ALLEN HEX TYPE SCREWDRIVERS

Black handles.

LN-1.27MM	1.27mm	4"	2 5/8"	6 5/8"	\$5.62
LN-1.5MM	1.5mm	4"	2 5/8"	6 5/8"	5.62
LN-2MM	2.0mm	4"	2 5/8"	6 5/8"	5.62
LN-2.5MM	2.5mm	4"	3 1/8"	7 1/8"	6.06
LN-3MM	3.0mm	4"	3 1/8"	7 1/8"	6.06
LN-4MM	4.0mm	4"	3 1/8"	7 1/8"	6.06
LN-5MM	5.0mm	4"	3 1/8"	7 1/8"	6.06
LN-6MM	6.0mm	4"	3 1/8"	7 1/8"	7.40

BALLPOINT STYLE, ALLEN HEX SCREWDRIVERS

Amber handles.

Xcelite No.	Hex	Blade	Handle	Overall	Price Each
LN-20BP	.050"	4"	2 5/8"	6 5/8"	\$7.40
LN-21BP	1/16"	4"	2 5/8"	6 5/8"	7.40
LN-22BP	5/64"	4"	2 5/8"	6 5/8"	7.40
LN-23BP	3/32"	4"	3 1/8"	7 1/8"	7.40
LN-764BP	7/64"	4"	3 1/8"	7 1/8"	7.40
LN-24BP	1/8"	4"	3 1/8"	7 1/8"	7.72
LN-964BP	9/64"	4"	3 1/8"	7 1/8"	7.72
LN-25BP	5/32"	4"	3 1/8"	9 1/8"	7.72
LN-26BP	3/16"	6"	4 1/8"	10 1/8"	7.72
LN-27BP	7/32"	6"	4 1/8"	10 1/8"	8.02
LN-28BP	1/4"	6"	4 1/8"	10 1/8"	8.02

METRIC ALLEN HEX TYPE SCREWDRIVERS

Black handles.

LN-1.27MMBP	1.27mm	4"	2 5/8"	6 5/8"	\$7.40
LN-1.5MMBP	1.5mm	4"	2 5/8"	6 5/8"	7.40
LN-2MMBP	2.0mm	4"	2 5/8"	6 5/8"	7.40
LN-2.5MMBP	2.5mm	4"	3 1/8"	7 1/8"	7.58
LN-3MMBP	3.0mm	4"	3 1/8"	7 1/8"	7.72
LN-4MMBP	4.0mm	4"	3 1/8"	7 1/8"	7.72
LN-5MMBP	5.0mm	4"	3 1/8"	7 1/8"	7.72
LN-6MMBP	6.0mm	4"	3 1/8"	7 1/8"	8.02

EXTENDED LENGTH TORX SCREWDRIVERS



The extended Torx screwdrivers are made for hard to reach places. They have an 11" extended shaft.

Xcelite No. XTD-8XL—Price Each.....	\$5.46
Xcelite No. XTD-10XL—Price Each.....	\$5.46
Xcelite No. XTD-15XL—Price Each.....	\$5.54



COLOR-CODED NUTDRIVERS (1/4" HOLE DEPTH)

Steel shafts with precision, cold-drawn, case-hardened sockets. Color coded plastic handles.

Xcelite No.	Color	Hex	Blade	Handle	Overall	Price Each
MIDGET POCKET CLIP STYLE						
P3	Blue	3/32"	1/4"	2 1/4"	3 1/2"	\$ 3.22
P4	Red	1/8"	1/4"	2 1/4"	3 1/2"	3.22
P5	Amber	3/32"	1/4"	2 1/4"	3 1/2"	3.22
P6	Black	3/16"	1/4"	2 1/4"	3 1/2"	3.22
P7	Brown	7/32"	1/4"	2 1/4"	3 1/2"	3.22
P8	Red	1/4"	1/4"	2 1/4"	3 1/2"	3.22
P9	Orange	9/32"	1/4"	2 1/4"	3 1/2"	3.22
P10	Amber	5/16"	1/4"	2 1/4"	3 1/2"	3.22
P11	Green	11/32"	1/4"	2 1/4"	3 1/2"	3.22
P12	Blue	3/8"	1/4"	2 1/4"	3 1/2"	3.22

REGULAR STYLE

1 1/8" hole depth for 6 thru 12; 1 1/4" for others.

6	Black	3/16"	3"	3 1/8"	6 1/8"	\$ 4.72
7	Brown	7/32"	3"	3 1/8"	6 1/8"	4.72
8	Red	1/4"	3"	3 1/8"	6 1/8"	4.72
9	Orange	9/32"	3"	3 1/8"	6 1/8"	4.72
10	Amber	5/16"	3"	3 1/8"	6 1/8"	4.72
11	Green	11/32"	3"	3 1/8"	6 1/8"	5.00
12	Blue	3/8"	3"	3 1/8"	6 1/8"	5.00
14	Brown	7/16"	2 7/8"	4 1/8"	7	6.40
16	Red	1/2"	2 7/8"	4 1/8"	7	6.40

REGULAR STYLE WITH FULL HOLLOW SHAFT

6" hole depth for HS-6 and 7; others 7".

HS-6	Black	3/16"	3 1/8"	3 1/8"	6 1/8"	\$ 5.38
HS-7	Brown	7/32"	3 1/8"	3 1/8"	6 1/8"	5.38
HS-8	Red	1/4"	3 1/8"	4 1/8"	7 1/8"	5.38
HS-9	Orange	9/32"	3 1/8"	4 1/8"	7 1/8"	5.38
HS-10	Amber	5/16"	3 1/8"	4 1/8"	7 1/8"	5.38
HS-11	Green	11/32"	3 1/8"	4 1/8"	7 1/8"	5.70
HS-12	Blue	3/8"	3 1/8"	4 1/8"	7 1/8"	5.70
HS-14	Brown	7/16"	3 1/8"	4 1/8"	7 1/8"	7.36
HS-16	Red	1/2"	3 1/8"	4 1/8"	7 1/8"	7.36
HS-18	Orange	9/16"	3 1/8"	4 1/8"	7 1/8"	7.36

EXTRA LONG STYLE WITH FULL HOLLOW SHAFT

Hole depth 8 3/4" for L-6; 9 3/4" for others.

L-6	Black	3/16"	6"	3 1/8"	9 1/8"	\$ 6.64
L-10	Amber	5/16"	6"	4 1/8"	10 1/8"	6.64
L-11	Green	11/32"	6"	4 1/8"	10 1/8"	7.00
L-12	Blue	3/8"	6"	4 1/8"	10 1/8"	7.00

METRIC NUTDRIVERS

Hole depth 1 5/8" for 4mm thru 9mm; 1 7/8" for 10 and 11mm; 7" for 12 and 13mm.

4MM	Black	4.0mm	3"	3 9/64"	6 5/64"	\$ 5.52
4.5MM	Black	4.5mm	3"	3 9/64"	6 5/64"	5.52
5MM	Black	5.0mm	3"	3 9/64"	6 5/64"	5.52
5.5MM	Black	5.5mm	3"	3 9/64"	6 5/64"	5.52
6MM	Black	6.0mm	3"	3 9/64"	6 5/64"	5.52
7MM	Black	7.0mm	3"	3 9/64"	6 5/64"	5.52
8MM	Black	8.0mm	3"	3 9/64"	6 5/64"	5.52
9MM	Black	9.0mm	3"	3 9/64"	6 5/64"	6.76
10MM	Black	10.0mm	2 7/8"	4 1/8"	7"	6.76
11MM	Black	11.0mm	2 7/8"	4 1/8"	7"	6.76
12MM	Black	12.0mm	3 7/8"	4 9/16"	7 1/4"	8.40
13MM	Black	13.0mm	3 7/8"	4 9/16"	7 1/4"	8.40

MAGNETIC HEX NUTDRIVERS

8M	Red	1/4"	3"	3 1/8"	6 1/8"	\$ 7.52
10M	Amber	5/16"	3"	3 1/8"	6 1/8"	7.52
L-8M	Red	1/4"	6"	4 1/8"	10 1/8"	9.56
L-10M	Amber	5/16"	6"	4 1/8"	10 1/8"	9.56
LL-8M	Red	1/4"	16 3/4"	4 1/8"	20 7/8"	22.02
LL-10M	Amber	5/16"	16 3/4"	4 1/8"	20 7/8"	22.02

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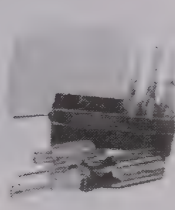
THIS IS ONLY A PARTIAL LISTING OF THE PRODUCTS
WE HAVE AVAILABLE. PLEASE
CONTACT US FOR ADDITIONAL PRODUCT INFORMATION.

XCELITE® HAND TOOLS

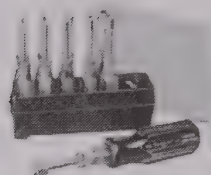
COMPACT CONVERTIBLE TOOL SETS



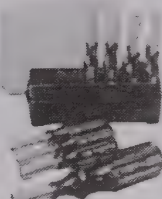
PS-88



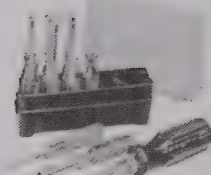
PS-7



PS-120



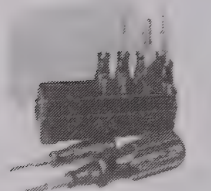
PS-121



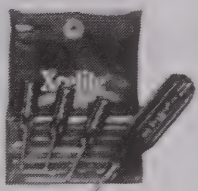
PS-130



PS-89



PS-90MM



M60

Hollow torque amplifier handle slips over handles of midget tools to provide larger gripping surface, extended reach, and increased driving power. Sets housed in flexible plastic, stand-up cases with tough see-thru covers. All individual tools are available separately.

Xcelite No. PS-88 Screwdriver Set—Five ($\frac{1}{32}$ ", $\frac{1}{16}$ ", $\frac{1}{32}$ ", $\frac{1}{16}$ ", $\frac{1}{4}$ " slot-tip and three (#0, #1, #2) Phillips screwdrivers. Price Each \$27.92

Xcelite No. PS-7 Screwdriver/Nutdriver Set—Two ($\frac{1}{32}$ ", $\frac{1}{16}$ " slot-tip and two (#0, #1) Phillips screwdrivers plus two ($\frac{1}{4}$ ", $\frac{1}{8}$ " nutdrivers. Price Each \$21.80

Xcelite No. PS-120 Nutdriver Set—Ten ($\frac{3}{32}$ ", $\frac{1}{8}$ ", $\frac{1}{32}$ ", $\frac{1}{16}$ ", $\frac{1}{32}$ ", $\frac{1}{4}$ ", $\frac{1}{32}$ ", $\frac{1}{16}$ ", $\frac{1}{32}$ ", $\frac{3}{16}$ ") nutdrivers. Price Each \$35.24

Xcelite No. PS-121 MM Metric Nutdriver Set—Ten (3mm, 3.5mm, 4mm, 4.5mm, 5mm, 5.5mm, 6mm, 7mm, 8mm, 10mm) nutdrivers. Price Each \$43.46

Xcelite No. PS-130 Screwdriver/Nutdriver Set—Two (#1, #2) Phillips tips, three ($\frac{1}{16}$ ", $\frac{3}{16}$ ", $\frac{1}{4}$ " slot tips, and five ($\frac{3}{16}$ ", $\frac{1}{4}$ ", $\frac{1}{8}$ ", $\frac{1}{32}$ ", $\frac{3}{16}$ ") nutdrivers. Price Each \$36.42

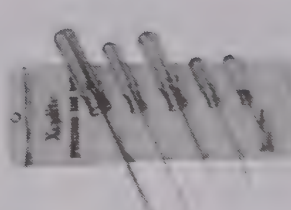
Xcelite No. PS-89 Hex Socket Screwdriver Set—Eight (.028", .035", .050", $\frac{1}{16}$ ", $\frac{3}{64}$ ", $\frac{1}{32}$ ", $\frac{1}{64}$ ", $\frac{1}{8}$ ") hex socket screwdrivers. Price Each \$26.12

Xcelite No. PS-90MM Metric Hex Socket Screwdriver Set—Eight (0.89mm, 1.27mm, 1.5mm, 2.0mm, 2.5mm, 3.0mm, 4.0mm, 5.0mm) hex socket screwdrivers. Price Each \$29.54

MINI-DRIVER KIT

Xcelite No. M60 Mini-Driver Kit—A miniature version of the Compact Convertible Set. One (#0) Phillips tip and five (.04", .055", .07", .08", .10") slot tips plus Torque Amplifier Handle. Price Each \$13.48

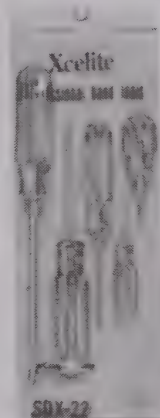
SCREWDRIVER SETS



SDR-11



XL-70



SDX-22



XST-5



SDS-44

Xcelite No. SDR-11 Screwdriver Set—Five ($\frac{1}{4}$ ", $\frac{3}{32}$ ", $\frac{1}{8}$ ", $\frac{1}{4}$ ", $\frac{1}{8}$ " round blade, slotted tip screwdrivers. Price Each \$24.00

Xcelite No. SDS-44 Screwdriver Set—Five ($\frac{1}{4}$ " stubby, $\frac{1}{8}$ ", $\frac{1}{8}$ ", $\frac{1}{4}$ ") Phillips screwdrivers. Price Each \$35.26

Xcelite No. SDX-22 Screwdriver Set—Five (#0, #1, #2, #2 stubby, #3) Phillips screwdrivers. Price Each \$26.14

Xcelite No. XST-3 Screwdriver Set—Three (#0, #1, #2) Super-tru tip Phillips screwdrivers. Price Each \$16.72

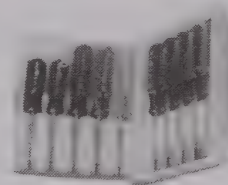
Xcelite No. XST-5 Screwdriver Set—Five (#0, #1, #1 long, #2, #2 long, #3) Super-tru tip Phillips screwdrivers. Price Each \$34.62

Xcelite No. SD-3V Screwdriver Set—Two ($\frac{3}{32}$ ", $\frac{1}{4}$ " slot-tip and one (#0) Phillips pocket-clip screwdrivers. Price Each \$7.18

Xcelite No. SRX-33 Screwdriver Set—Four ($\frac{1}{8}$ ", $\frac{1}{8}$ ", $\frac{1}{4}$ ", $\frac{1}{8}$ " round-blade slot-tip and two (#1, #2) Phillips screwdrivers. Price Each \$32.56

Xcelite No. XL-70 Offset Screwdriver Set—17 bits (Allen, Phillips, slot-tip) and two drivers in plastic box. Price Each \$66.14

NUTDRIVER KITS IN "KEEP AND CARRY" CASE



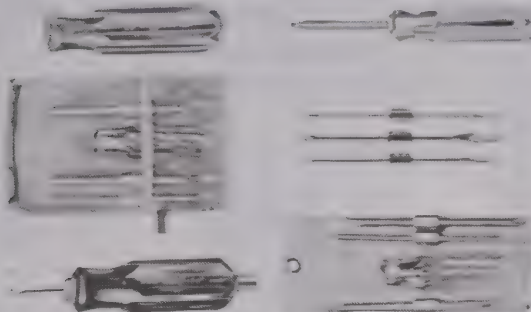
Xcelite No. HS-6-18 Nutdriver Kit—Ten ($\frac{3}{16}$ ", $\frac{7}{32}$ ", $\frac{1}{4}$ ", $\frac{1}{32}$ ", $\frac{3}{16}$ ", $\frac{1}{32}$ ", $\frac{3}{16}$ ", $\frac{1}{2}$ ", $\frac{1}{16}$ ") hollow shaft nutdrivers. Price Each \$59.58

Xcelite No. 4-13 MM Metric Nutdriver Kit—Ten (4mm, 4.5mm, 5mm, 5.5mm, 6mm, 7mm, 8mm, 10mm, 12mm, 13mm) nutdrivers. Price Each \$61.32

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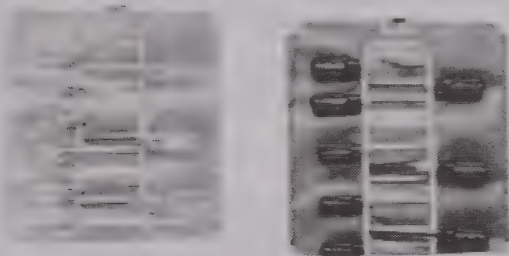
XCELITE® HAND TOOLS

COMBINATION REVERSIBLE SCREWDRIVERS AND KITS



- Xcelite No. 25 Handle**—Accepts RB and CR tools (listed below). Measures 1½" dia. × 4½" long. Price Each \$4.06
- Xcelite No. RB-1 Reversible Blade**—One end has #1 Phillips tip; other end has ⅜" slotted tip. Price Each \$5.52
- Xcelite No. RB-2 Reversible Blade**—One end has #2 Phillips tip; other end has ¼" slotted tip. Price Each \$5.52
- Xcelite No. RB-3 Reversible Blade**—One end has #3 Phillips tip; other end has ⅜" slotted tip. Price Each \$5.52
- Xcelite No. CR-1 Kit**—No. 25 handle and RB-1 reversible blade. Price Each \$9.58
- Xcelite No. CR-2 Kit**—No. 25 handle and RB-2 reversible blade. Price Each \$9.58
- Xcelite No. CK20 Plastic View Kit**—Zippered plastic case with RB-1 and RB-2 blades and No. 25 handle. Price Each \$15.34
- Xcelite No. CK23 Plastic View Kit**—Zippered case with RB-1, RB-2 and RB-3 reversible blades and No. 25 handle. Price Each \$20.90
- Xcelite No. CK-3 Pocket Roll Kit**—Plastic case contains RB-1, RB-2 and RB-3 reversible blades and No. 25 handle. Price Each \$20.90
- Xcelite No. 600 Four-Way Pocket Tool**—Double-end handle has two sizes of nutdrivers while reversible blade fits slotted or Phillips screws. Price Each \$10.08

ROLL-UP KITS FOR ALLEN HEX SCREWDRIVERS



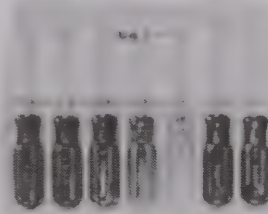
- Xcelite No. LN-9BP Ballpoint Allen Screwdrivers**—Nine (.050", ⅛", ⅜", ½", ⅝", ¾", 1", 1½", 2") ballpoint Allen screwdrivers in roll-up plastic case. Price Each \$66.44
- Xcelite No. LN-8MMBP Metric Ballpoint Allen Screwdrivers**—Eight (1.27mm, 1.5mm, 2mm, 2.5mm, 3mm, 4mm, 5mm, 6mm) ballpoint Allen screwdrivers in roll-up plastic case. Price Each \$60.96
- Xcelite No. LN-11 Allen Screwdriver Kit**—Eleven (.050", ⅛", ⅜", ½", ⅝", ¾", 1", 1½", 2") Allen hex screwdrivers in roll-up plastic-coated canvas case. Price Each \$54.60
- Xcelite No. LN-8MM Metric Allen Hex Screwdrivers**—Eight (1.27mm, 1.5mm, 2mm, 2.5mm, 3mm, 4mm, 5mm, 6mm) Allen hex screwdrivers in roll-up plastic-coated canvas case. Price Each \$47.42

NUTDRIVER SETS



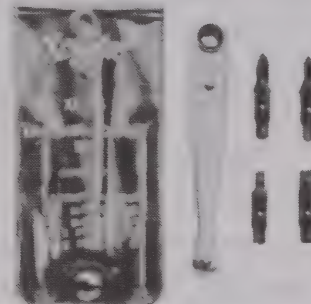
- Xcelite No. 157 Nutdriver Set**—Seven drilled-shaft (⅜", ½", ⅝", ¾", 1", 1½", 2") nutdrivers. Price Each \$36.46
- Xcelite No. 177 Nutdriver Set**—Seven hollow-shaft (⅜", ½", ⅝", ¾", 1", 1½", 2") nutdrivers. Price Each \$41.72

"TRAY BIEN" NUTDRIVER SET



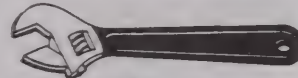
- Xcelite No. 127TB Nutdriver Set**—Seven solid shaft (⅜", ½", ⅝", ¾", 1", 1½", 2") nutdrivers in a plastic pouch. Price Each \$33.08
- Xcelite No. 147TB Nutdriver Set**—Seven hollow-shaft (⅜", ½", ⅝", ¾", 1", 1½", 2") nutdrivers. Price Each \$41.72

OFFSET RATCHET SCREWDRIVER SET



- Xcelite No. XL-75 5-Piece Offset Ratchet Screwdriver Set**—Two slotted bits (⅜", ½"), two Phillips bits (#1, #2) and reversible ratchet arm. Price Each \$20.46

ADJUSTABLE WRENCHES



Xcelite No.	Length	Max. Opening	Price Each
44CG	4"	1½"	\$17.54
46CG	6"	¾"	18.18
48CG	8"	1⅞"	19.10

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WE BELONG TO A NATIONAL BUYING GROUP, EDBA,
THAT GIVES US GREATER PURCHASING POWER
TO ASSURE YOU OF COMPETITIVE PRICES.

XCELITE® HAND TOOLS

SERIES 99® BLADES, SHANKS AND HANDLES

Series 99 interchangeable blades, shanks and handles are available separately allowing gradual, economical accumulation of whatever items might be needed for individual requirements.



HANDLES

Xcelite No.	Description	Color	Price Each
99-1	Regular	Amber	\$ 4.20
99-2	Junior	Amber	4.04
99-3	Stubby	Amber	4.00
99-4	Tee	Black	5.48

REVERSIBLE RATCHETING HANDLES

99-1-R	Regular	Black	\$28.40
99-4-R	Tee	Black	28.40



Xcelite No.	Size	Price Each
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STANDARD NUTDRIVERS

99-6	3/16" hex x 3 3/8" long	\$4.00
99-7	7/32" hex x 3 3/8" long	4.00
99-8	1/4" hex x 3 3/8" long	4.00
99-S8	1/4" hex x 1 3/8" long	3.16
99-9	9/32" hex x 3 3/8" long	4.00
99-10	5/16" hex x 3 3/8" long	4.00
99-S10	5/16" hex x 1 3/8" long	3.16
99-11	11/32" hex x 3 3/8" long	4.18
99-12	3/8" hex x 3 3/8" long	4.18
99-S12	3/8" hex x 1 3/8" long	3.16
99-14	7/16" hex x 4" long	5.36
99-16	1/2" hex x 4" long	5.36

MAGNETIC NUTDRIVERS

99-8M	1/4" hex x 3 3/8" long	\$5.56
99-10M	5/16" hex x 3 3/8" long	5.56

METRIC NUTDRIVERS

99-4MM	4mm hex x 92mm long	\$4.52
99-4.5MM	4.5mm hex x 92mm long	4.52
99-5MM	5mm hex x 92mm long	4.52
99-5.5MM	5.5mm hex x 92mm long	4.52
99-6MM	6mm hex x 92mm long	4.52
99-7MM	7mm hex x 92mm long	4.52
99-8MM	8mm hex x 92mm long	4.52
99-9MM	9mm hex x 92mm long	5.56
99-10MM	10mm hex x 102mm long	5.56
99-11MM	11mm hex x 102mm long	5.56



SLOTTED SCREWDRIVERS

99-125	1/8" wide x 3 7/8" long	\$4.00
99-811	3/16" wide x 3 7/8" long	4.00
99-250	1/4" wide x 3 7/8" long	4.00
99-312	5/16" wide x 3 7/8" long	4.00

PHILLIPS SCREWDRIVERS

99-820	#0 tip x 3 7/8" long	\$4.00
99-821	#1 tip x 3 7/8" long	4.00
99-822	#2 tip x 3 7/8" long	4.00



POSIDRIV® SCREWDRIVER

*Trademark of Phillips Screw Co.

99-831	#1 tip x 3 7/8" long	\$6.70
99-832	#2 tip x 3 7/8" long	6.70
99-833	#3 tip x 3 7/8" long	6.70

Xcelite No.	Application	Price Each
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ALLEN HEX SOCKET SCREWDRIVERS

99-20	.050" hex x 4" long	\$ 3.58
99-21	1/16" hex x 4" long	3.58
99-22	5/64" hex x 4" long	3.58
99-23	3/32" hex x 4" long	3.58
99-764	7/64" hex x 4" long	3.58
99-24	1/8" hex x 4" long	3.58
99-964	9/64" hex x 4" long	3.58
99-25	5/32" hex x 4" long	3.58
99-26	3/16" hex x 4" long	3.58

METRIC ALLEN HEX SOCKET SCREWDRIVERS

99-71MM	1.27mm hex x 102mm long	\$ 4.56
99-72MM	1.5mm hex x 102mm long	4.56
99-73MM	2.0mm hex x 102mm long	4.56
99-74MM	2.5mm hex x 102mm long	4.56
99-75MM	3.0mm hex x 102mm long	4.56
99-76MM	4.0mm hex x 102mm long	4.56
99-77MM	5.0mm hex x 102mm long	4.56

BALLPOINT ALLEN HEX SOCKET SCREWDRIVERS

99-20BP	.050" hex x 4" long	\$ 6.08
99-21BP	1/16" hex x 4" long	6.08
99-22BP	5/64" hex x 4" long	6.08
99-23BP	3/32" hex x 4" long	6.08
99-764BP	7/64" hex x 4" long	6.08
99-24BP	1/8" hex x 4" long	6.08
99-964BP	9/64" hex x 4" long	6.08
99-25BP	5/32" hex x 4" long	6.08
99-26BP	3/16" hex x 4" long	6.08

METRIC BALLPOINT ALLEN HEX SCREWDRIVERS

99-71MMBP	1.27mm hex x 102mm long	\$ 5.82
99-72MMBP	1.5mm hex x 102mm long	5.82
99-73MMBP	2.0mm hex x 102mm long	5.82
99-74MMBP	2.6mm hex x 102mm long	5.82
99-75MMBP	3.0mm hex x 102mm long	5.82
99-76MMBP	4.0mm hex x 102mm long	5.82
99-77MMBP	5.0mm hex x 102mm long	5.82

BRISTOL MULTIPLE SPLINE SCREWDRIVERS

99-61	.048" dia. x 4" long	\$ 3.58
99-62	.060" dia. x 4" long	3.58
99-63	.069" dia. x 4" long	3.58
99-64	.072" dia. x 4" long	3.58
99-65	.076" dia. x 4" long	3.58
99-66	.096" dia. x 4" long	3.58
99-67	.111" dia. x 4" long	3.58
99-68	.145" dia. x 4" long	3.58
99-69	.183" dia. x 4" long	3.58

CLUTCH HEAD SCREWDRIVERS

99-G-316	3/16" tip x 3 7/8" long	\$ 4.20
99-G-532	5/32" tip x 3 7/8" long	4.20

SCRULOX SCREWDRIVERS

99SL-0	#0 tip x 4" long	\$ 4.00
99SL-1	#1 tip x 4" long	4.00
99SL-2	#2 tip x 4" long	4.00

REAMER

99-38	1/8" x 3/8" x 4 1/2" long	\$10.26
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EXTENSIONS

99-X5	4" long	\$ 5.48
99-X10	7" long	5.94

XCELITE® IS A REGISTERED TRADEMARK OF COOPER INDUSTRIES INC.

XCELITE® HAND TOOLS

SERIES 99® SERVICE KITS

Series 99 Service Kits and Sets are made up primarily of various screwdriver, nutdriver and other blades which can be used interchangeably in Series 99 handles. All blades are high carbon steel with highly polished finish except Bristol and Allen hex types, which are precision formed, cold drawn, case hardened steel. Plastic handles have patented spring device that holds blades firmly, yet permits quick, easy insertion and removal. Regular handles accommodate all blades, single and reversible. Stubby, Tee and Ratchet handles can be used only with single-end blades.

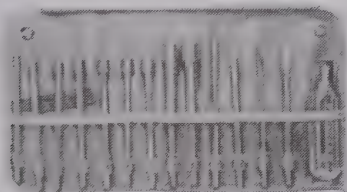
MODEL 99SL SCRULOX SCREWDRIVER KIT



Contains regular (1 1/8" x 4 1/8") plastic handles. 4 Screwlox (square recessed head) blades (#1, #2, #3 and #4), and 1/4" slotted screwdriver blade in plastic case.

Xcelite No. 99SL—Price Each \$24.20

MODEL 99PR MULTI—PURPOSE ROLL KIT



14-piece nut and screwdriver set contains regular handle (1 1/8" x 4 1/8"), 9 nutdriver blades (3/16" thru 1/2"), 2 slotted screwdriver blades (3/16" and 1/4"), and 2 Phillips screwdriver blades (#1 and #2) in plastic case.

Xcelite No. 99PR—Price Each \$70.20

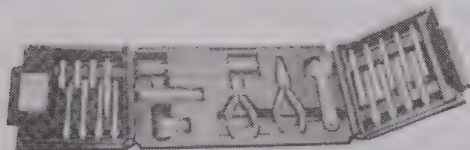
MODEL 99SM SERVICE MASTER ROLL KIT



Versatile 23-piece set of quality tools in a durable, roll-up plastic-covered canvas case which weighs only 2 3/4 lbs. Provides a variety of quick-change tools and tool combinations to speed up assembly and service work. Contains 6" long-nose cushion grip plier, 5" diagonal cushion grip plier, 6" thin-plastic handles for interchangeable blades, 9 regular (3/16" thru 1/2") and 3 stubby (1/4", 3/16" and 3/8") nutdriver blades, #1 and #2 Phillips screwdriver blades 3/16" and 1/4" slotted screwdriver blades, 1/4" to 3/8" reamer blade and 7" extension blade in plastic-coated canvas case. All tools available separately.

Xcelite No. 99SM—Price Each \$161.36

MODEL 99SMX TOOL KIT WITH CARRYING CASE



Same as 99SM, except with carrying case.

Xcelite No. 99SMX—Price Each \$161.36

MODEL 99SMW SERVICE ROLL KIT



Plastic-coated canvas case holds all the tools included in 99SM, plus soldering iron and wire stripper cutter.

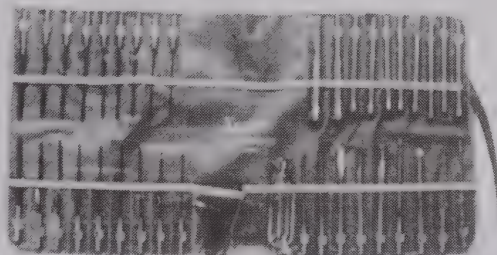
Xcelite No. 99SMW Service Roll Kit—Price Each \$211.38

MODEL 99MWX TOOL KIT WITH CARRYING CASE

Same as 99SMW, except with carrying case.

Xcelite No. 99MWX—Price Each \$211.38

MODEL 99MP MULTI-PURPOSE TOOL KIT



All the most popular Series 99 tools are readily available in this convenient 39-piece kit. Plastic-coated canvas case folds into a compact package which is quickly secured by means of a permanently attached loop. No tying required. Two extra pockets permit addition of pliers, snips or other tools. Kit contains regular (1 1/8" x 4 1/8") and Tee (3 1/2" x 1 1/8") plastic handles for interchangeable blades, 9 regular nutdrivers (3/16" x 1/2"), 1 magnetic nutdriver (3/16"), 9 Allen hex type screwdrivers (.050" thru 3/16"), 9 Bristol multi-spline screwdrivers (.048" thru .183"), 4 slotted screwdrivers (1/8" thru 3/16") 3 Phillips screwdrivers (#1, #2, and #3), 1 reamer (1/8" to 3/8"), and 4" extension blade.

Xcelite No. 99MP Multi-Purpose Tool Kit—Price Each \$187.18

MODEL 99MPX TOOL KIT WITH CARRYING CASE

Same as 99MP, except with carrying case.

Xcelite No. 99MPX—Price Each \$187.18

MODEL 99-PA-50 CORDLESS SCREWDRIVER TOOL KIT



The 99-PA-50 tool kit is designed for use with cordless rechargeable screwdrivers. This 12-piece set comes complete with the most popular sizes (including a power adapter).

Xcelite No. 99-PA-50—Price Each \$22.60

MODEL 99 SPC PERSONAL COMPUTER REPAIR KIT



The 99 SPC is ideal for repairs on all personal computers. Antistatic chip tools protect from ESD damage. Comes complete in a convenient roll-up pouch.

Xcelite No. 99 SPC—Price Each \$44.42

XCELITE® IS A REGISTERED TRADEMARK OF COOPER INDUSTRIES INC.

XCELITE® HAND TOOLS

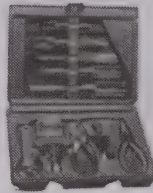
TOOL HOLSTER



Handy tool holster has tape holder, knife clip and five tool pockets. Durable saddle leather construction with natural cowhide finish. Comfortable, hip-contoured back. Hot waxed stitching. Brass rivets. Tools not included.

Xcelite No. 150 Tool Holster—
Price Each **\$41.10**

TKX-11 MULTI-PURPOSE TOOL KIT



Versatile kit contains 11 quality tools. Perfect for all types of routine repair and simple-do-it-yourself projects. Everything comes neatly packaged in an attractive, easy-to-store case.

Xcelite No TKX-11 Multi-Purpose Tool Kit—
Price Each **\$87.92**

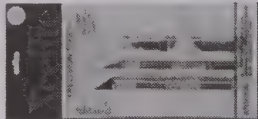
ELECTRICIAN'S KNIFE



Combination knife and screwdriver. Screwdriver blade has sharp edge for scraping insulation. Positive lock when open.

Xcelite No. K22 Electrician's Knife—Price Each **\$21.46**

LIGHT & MEDIUM DUTY KNIFE SET



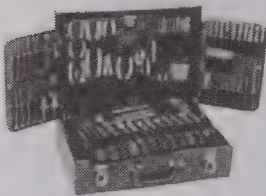
12-piece knife set includes XN-100 and XN-200 knives plus 10 assorted blades.

Xcelite No. XNS-100 Knife Set—
Price Each **\$10.48**

ATTACHE-STYLE TOOL CASES

Choice of four sturdy, spacious, attractive attache-style tool cases to meet virtually every need. Each holds an ideal assortment of Xcelite hand tools, neatly mounted in pockets, plus generous space for an additional assortment of test instruments, parts boxes, soldering equipment and other tools. Roomy file pocket in lid.

MODEL TC-100/ST



Largest and most elaborate of the four cases. Contains 53 individual tools plus 31 tools from Series 99 interchangeable blades and handles and two specialized screwdriver/nutdriver kits. Case is covered with tough, chestnut-brown, leather-grain Marvelon. Removable, three-panel, hinged pallet and tray fitted with elastic loop and plastic pocket tool holders. Solid brass locks, latches and other hardware. Padded handle. Partitioned bottom compartment for other tools and meters. **Size: 9½" × 13½" × 6¾".**

Xcelite No. TC-100/ST Attache-Style Tool Case—With tools.
Price Each **\$877.82**
Xcelite No. TC-100/MT Attache-Style Tool Case—Without tools.
Price Each **\$281.08**

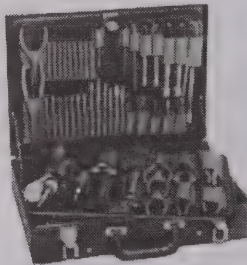
MODEL TCMB-100/ST



Injection molded polypropylene case is lighter and slimmer than the standard TC-100/ST case above. Contains identical tools as the TC-100/ST. Same size.

Xcelite No. TCMB-100/ST Attache-Style Tool Case—With tools.
Price Each **\$865.74**
Xcelite No. TCMB-100/MT Attache-Style Tool Case—Without tools.
Price Each **\$269.00**

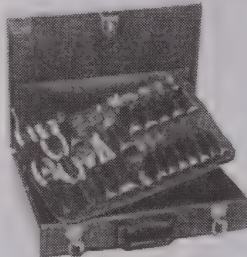
MODEL TC-150/ST



A carefully selected, intermediate assortment of hand tools plus a 25-watt soldering iron. Contains 23 individual tools plus 24 tools from Series 99 blades and handles, offset ratchet screwdriver set, measuring tape, solder and soldering iron. Case is covered with durable whiskey-tan Marvelon. Removable pallets in lid and base fitted with plastic tool pockets. Partitioned base has space for extra tools and meters. Solid brass hardware and padded handle. **Size: 18½" × 13½" × 5".**

Xcelite No. TC-150/ST Attache-Style Tool Case—With tools.
Price Each **\$708.32**
Xcelite No. TC-150/MT Attache-Style Tool Case—Without tools.
Price Each **\$399.86**

MODEL TC-200/ST



Contains 10 individual tools plus 27 tools from Series 99 blades and handles. Case is covered with black Durahyde. Removable pallet in lid fitted with plastic tool pockets. Space in lower section for additional tools. Brass-finished hardware. **Size: 18½" × 13½" × 4¾".**

Xcelite No. TC-200/ST Attache-Style Tool Case—With tools.
Price Each **\$447.40**
Xcelite No. TC-200/MT Attache-Style Tool Case—Without tools.
Price Each **\$149.84**

XCELITE® IS A REGISTERED TRADEMARK OF COOPER INDUSTRIES INC.

**OUR PRICES ARE COMPETITIVE DUE TO OUR ASSOCIATION
WITH A NATIONAL BUYING GROUP.**

ECG MODEL AM-20 ANALOG MULTIMETER



- 20 Ranges, 9 functions
 - $\pm 3\%$ Basic DC accuracy
 - $3\frac{1}{2}''$ Mirrored scale
 - Jeweled meter movement
 - $20K \Omega/V$ DC, $8K \Omega/V$ AC input sensitivity
 - Fuse and diode protection
 - 10-Amp DC range
 - 1000 Volts AC/DC
 - Transistor ICEO test
 - Diode test (measures VF)
 - Continuity buzzer
 - High impact plastic case
 - Metal tilt stand
 - Anti-Skid pads
 - Safety recessed jacks
 - Complies with UL1244
 - 90-Day limited warranty
- Supplied with safety test lead set batteries, and instruction manual.

ECG Model AM-20—Price Each \$29.95

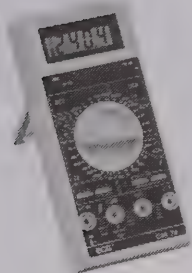
ECG MODEL DM-37 DIGITAL MULTIMETER



- 0.9" high, $3\frac{1}{2}$ digit display
- Withstands 5' drop
- Voltage—AC/DC
- Current—20A DC
- Resistance—20 M Ω
- Diode test
- Continuity test
- 0.5% Basic DC accuracy

ECG Model DM-37—Price Each \$48.95

ECG MODEL DM-38 DIGITAL MULTIMETER



- $3\frac{1}{2}$ digit
 - Peak data hold
- Measures:**
- Capacitance—40 μ F
 - Frequency—4 MHz
 - Logic—TTL type
 - Transistor hFE
 - Voltage—AC/DC
 - Current—20 A AC/DC
 - Current—20 A AC/DC
 - Resistance—4000 M Ω
 - Semiconductor junctions
 - Continuity

ECG Model DM-38—Price Each \$88.95

ECG MODEL DM-78A HEAVY DUTY AUTO-RANGING DIGITAL MULTIMETER



- Water resistant (O-ring seals)
 - Withstands 5' drop
 - Protective holster
 - Large display window
 - 3200 count LCD, .55" H
 - 65 segment analog bar graph
 - 0.5% Basic DC accuracy
 - Auto power off
 - Probe holder
 - 10 M Ω input Z
 - "No hand" data hold
 - Input warning beeper
 - 20 A AC/DC fused
 - Diode test
 - Instant continuity beeper
 - Tilt stand
 - Overload protection
 - One year limited warranty
- Protective holster (MH-350), batteries, test leads (ML-375) and instruction manual included.

ECG Model DM-78A—Price Each \$119.00

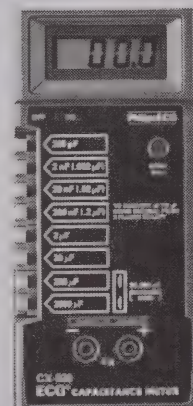
ECG MODEL DM-305A DIGITAL MULTIMETER



- Water resistant (O-ring seals)
 - Withstands 5' drop
 - Protective holster
 - 0.5% Basic DC accuracy
 - Auto power off
 - Diode test
 - Instant continuity beeper
 - 20 A AC/DC fused
 - Input warning beeper
 - 10 M Ω input Z
 - Tilt stand
 - Overload protection
 - Probe holder
 - One year limited warranty
- Protective holster (MH-350), battery, test leads (ML-375) and instruction manual included.

ECG Model DM-305A—Price Each \$92.95

ECG MODEL CX-920 DIGITAL CAPACITANCE METER

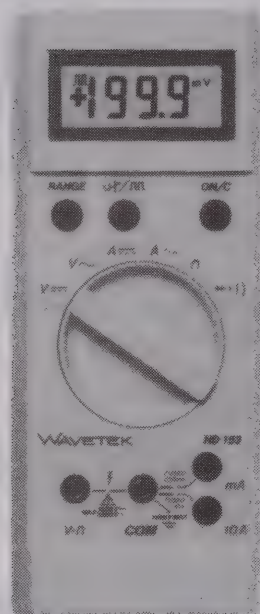


- Measures to 20,000 μ F
 - Portable, battery operated
 - 0.1 pF to 20,000 μ F, 9 ranges
 - 0.5% Basic accuracy
 - $3\frac{1}{2}''$ Digit LCD, 0.5" H
 - Zero adjustment
 - Input protected
 - Low battery indicator
 - Overrange indicator
 - Pushbutton design
 - Rugged construction
 - Tilt stand
 - Anti-skid pads
 - One year limited warranty
- Supplied with carrying case, test lead set, battery, spare fuse, and instruction manual.

ECG Model CX-920—Price Each \$79.95

PRICES SHOWN ARE FOR REFERENCE ONLY. PLEASE CALL US FOR CURRENT QUOTES.

HD153



Made in the USA

Heavy Duty Tough. With a thick-walled case of fire resistant, high-impact Valox®, the HD153 can withstand a drop onto concrete from a height of 10 feet. Special O-rings seal the entire case making the HD153 fully contamination proof. And, two 600V fuses guard against current overload.

Fault Finder™ Intermittent Detector.

Emits a variable tone that responds very fast to changing inputs. Intermittents are quickly identified by a crackling sound. Tone allows for easy peaking and nulling of circuits.

The rapid **Logic Pulse Detector** allows you to easily identify if a pulse has occurred using standard test leads.

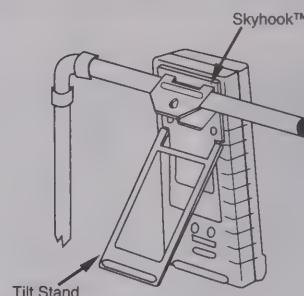
If you're in a tight spot, a convenient **Skyhook™** lets you hang your meter from a pipe (up to 3/4 inch), panel, flange, or virtually anywhere. The **Tilt Stand** provides a stable platform for your meter.

Autoranging allows you to instantaneously make a measurement. **Range-Lock** allows you to make rapid measurements in a particular range. When using Range-Lock in conjunction with the audible tone, you can make measurements by listening to the tone without having to take your eyes off your work.

Includes a spare 250mA/600V fuse, one 9V-NEDA battery 1604, one pair of test leads, and an operator's manual.

Heavy Duty Tough

- Withstands A 10' Drop Onto Concrete
- Overload-Proof for Electrical Ruggedness
Voltage Inputs Protected Up to 1500VDC
- Contamination Proof - 5 Year Warranty
- Super Fast Autoranging and Range-Lock
- Audible Readout Detects Intermittents,
Checks Capacitors, Simplifies
Peaking / Nulling
- Logic Pulse Detector
- Tilt Stand and Skyhook™ for
Hands Free Operation
- Auto-Off: Saves Batteries



HD153 Specifications (at 23°C ± 5°C; <70% R.H.)

DC & AC Voltage

Ranges 200mV, 2V, 20V, 200V, 1500VDC/1000VAC
Accuracy DC: ±0.25%rdg ±1dgt; AC: ±0.75%rdg ±3dgt (45-1kHz)
AC Conversion Type Average Sensing RMS Indicating
Resolution 100µV in the 200mV range
Input Impedance AC: 10MΩ, shunted by <100pF; DC: 10MΩ
NMRR/CMRR >60dB (60Hz) / >140dB

AC & DC Current

Ranges (AC and DC) 20mA, 200mA, 10A
DC Accuracy 20mA, 200mA Range: ±0.75%rdg ±1dgt; 10A Range: ±1.5%rdg ±1dgt
AC Acc. (45Hz-1kHz) <10A Range: ±1.5%rdg ±2dgt; 10A Range: ±2.0%rdg ±2dgt
AC Conversion Type Average Sensing RMS Indicating
Voltage Burden 20mV/mA; 40mV/A
Resolution 100µV in the 20mA range

Resistance

Accuracy Ranges 200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ, 20MΩ
200Ω-2MΩ ±0.5%rdg ±2dgt
±1.5%rdg ±2dgt

Max. Open Circuit Voltage 6.5VDC
Max. In-Range Voltage 200mV (2V for 20MΩ range)
Max Test Current 1.1mA

Continuity Test

Threshold 150Ω
Response Time <100ms
Indication Visual and audible (continuous tone)

Diode Test

Logic Pulse Detector

Range: 0V to 2V; Accuracy: ±1.0%rdg ±1dgt; Test Current: 1mA ±1%
Logic Levels: TTL, CMOS; Threshold: +2.6V; Minimum Pulse: 50ns;
Detector: AC coupled; Impedance: 10MΩ / 100pF;
Pulse Rise Rate: 10µs max;
Pulse Repetition Rate: 1Mpps max; Indication: 40ms beep

OVERLOAD PROTECTION

Transient Protection

6kV for 10µs between any 2 input jacks, any range

DCV and Logic Ranges 1500VDC or pk AC, any range

ACV Ranges >10Hz: 750VRMS/1000V peak AC,
<10Hz: 400VDC or peak AC

Current Ranges <10A: 250mA/600V fast blow fuse (1000A interrupt rating), 10A Range: 15A/600V fuse (100kA interrupt rating)

Resistance/Diode/Continuity Ranges 500VDC or RMS AC

GENERAL

Digits 3½

Range Lock; Audible Readout; Measurement Rate 5/second

Shock and Vibration Meets MIL-T-28800, Class II Type A

Operating Temperature 0°C to 50°C (32°F to 122°F)

Storage Temperature -40°C to 60°C (-100°F to 140°F)

Battery Type/Life One 9V Alkaline/500 hours,
Lithium/1000 hours

Auto Power Down In order to conserve battery life, these meters automatically switch off after one hour of inactivity

Dimensions (H x W x D)

173mm x 71mm x 32mm (6.8" x 2.8" x 1.3")

Weight 326g (7 lbs.)

Warranty Three years standard, one year calibration,
five years contamination

HD153		\$169.00
H220	Black Holster	14.00
H220Y	Yellow Holster	14.00
VC211	Padded Vinyl Case	11.00
DC215	Hard Case	30.00
DC217	Hard Case for meter and accessory storage	36.00

DUE TO CONTINUING DEVELOPMENTS IN ELECTRONICS, NEW ITEMS ARE CONSTANTLY BEING ADDED TO OUR INVENTORY. CALL US FOR THE LATEST INFORMATION.

The Instrumentation Products Division of Beckman Industrial is now a part of Wavetek Corporation

XL Series

Full Function, Pocket-Size

- Large LCD
- 10 Amp Fusing (DM10XL, DM15XL)
- Safety Tester™ (DM10XL)
- 20MHz Logic Probe (DM15XL)

DM15XL. The DM15XL is ideal for testing digital equipment. It features a built-in 20MHz TTL logic detector. The DM15XL also offers 28 measurement ranges, including AC/DC volts, AC/DC current to 10A (fused), resistance to 2000MΩ, diode testing and a continuity beeper. **\$9.95**

DM15XL



DM10XL. The DM10XL provides 21 ranges, measuring AC/DC volts, DC current to 10A (fully fused), resistance to 20MΩ, diode testing and a continuity beeper. Built-in Safety Tester™ quickly indicates live voltage levels with LEDs (6, 12, 24, 50, 110 and 220V). **\$9.95**

DM10XL

DM5XL. Pocket-sized, yet with a large easy-to-read LCD, the DM5XL has 17 ranges to measure AC/DC volts, DC current and resistance to 2MΩ. Diode testing and a continuity beeper make the DM5XL great for most field service applications, shop or classroom. **\$9.95**



DM5XL

H10 Holster (XL Series DMMs) Black **\$9.95**
H10Y Holster (XL Series DMMs) Yellow **\$9.95**
VC20 Vinyl Case (XL Series DMMs) not shown **\$9.95**



DM2. The DM2 is a smaller sized unit in the Wavetek pocket-sized DMM line. It has full DMM capability with AC and DC volt measurement, DC current from low microamperes to 200 milliamps, resistance and diode test. Choose the DM2 when low price and compact meter size are important factors. **\$7.95**

DM2

Credit-Card-Style DM78

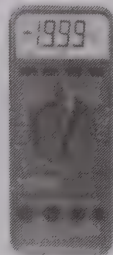
DM78. The DM78 is the smallest battery powered DMM on the market. Yet with its autoranging, 2000 count display, 15 measurement ranges, continuity beeper, and diode test function, it is a highly functional and powerful digital multimeter that fits into your shirt pocket or toolbox. Grip indentations on the rotary dial make it easy to change between functions while the nickel-plated test leads strengthen its dependability. Two LR-44 batteries included. **\$29.95**



XT Series

Multi-Function, Compact

DM27XT



DM25XT



DM23XL



Inductance	—	—	—
Capacitance	—	—	—
Frequency	—	—	—
Temperature	—	—	—
Logic Probe	—	—	—
h _{FE} Tester	—	—	—
Fused AC/DC Amps	20A	20A	10A

DM27XT. The most complete handheld multimeter for troubleshooting to the component level. Measures inductance to 20H, capacitance to 2000μF, frequency to 20MHz with 2 sensitivity ranges. Logic probe. Max reading hold. Screw-on alligator clips. "Wrong Input" warning beeper. Fused 20A AC/DC Current. **\$119.95**

DM25XT. Provides 40 ranges measuring AC/DC volts, AC/DC current to 20A (fused), resistance to 2000MΩ, capacitance to 2000μF and frequency to 2kHz. "Wrong Input" warning beeper, screw-on alligator clips. **\$99.95**

DM23XT. Provides 37 ranges measuring AC/DC volts, AC/DC current to 10A (fused), resistance to 2000MΩ, temperature to 1400°F/750°C, logic probe. "Wrong Input" warning beeper. Built-in Safety Tester™ quickly indicates live voltage levels with LEDs (50, 110, 220, 440VAC). Includes Bead Tip K Type Temp Probe **\$89.95**

H30 Holster for XT Series DMMs - Black **\$11.95**

H30Y Holster for XT Series DMMs - Yellow **\$11.95**

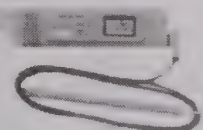
VC30 Vinyl Case for XT Series DMMs - Black **\$12.95**

Function Specifications

	DM2 • DM5XL • DM10XL • DM15XL	DM23XT • DM25XT • DM27XT
DC Voltage (Volts)		
Ranges	200mV, 2, 20, 200, 1000V	200mV, 2, 20, 200, 1000V
Resolution	100μV max	100μV max
Basic Accuracy	DM2, DM5XL: 0.8% + 1 DM10XL: 0.7% + 1; DM15XL: 0.5% + 1	0.5% + 1
AC Voltage (Volts)		
Ranges	DM2, DM5XL: 200, 500V; DM10XL: 200, 750V DM15XL: 200mV, 2, 20, 200, 750V	200mV, 2, 20, 200, 750V
Resistance (Ohms)		
Ranges	DM2, DM5XL: 200, 2k, 20k, 200k, 2MΩ DM10XL: 200, 2k, 20k, 200k, 2M, 20MΩ DM15XL: 200, 2k, 20k, 200k, 2M, 20M, 200M, 2000MΩ	200, 2k, 20k, 200k, 2M, 20M, 2000MΩ
Overload Protection	500VDC/VAC Peak	500VDC/VAC Peak
DC Current (Amps)		
Ranges	DM2, DM5XL: 200μ, 2m, 20m, 200mA DM10XL, DM15XL: 200μ, 2m, 20m, 200m, 10A	DM23XT: 200μ, 2m, 20m, 200m, 10A DM25XT, DM27XT: 200μ, 2m, 20m, 200m, 20A
Resolution	100nA max	100nA max
Overload Protection	DM2, DM5XL: 500mA/250V fuse DM10XL, DM15XL: 0.5A, 250V fuse; 10A, 250V fuse	DM23XT: 500mA/250V fuse; 10A/600V fuse DM25XT, DM27XT: 500mA/250V fuse; 20A/600V fuse
AC Current (Amps)		
Ranges	DM2, DM5XL, DM10XL: N/A DM15XL: 200μ, 2m, 20m, 200m, 10A	DM23XT: 200μ, 2m, 20m, 200m, 10A DM25XT, DM27XT: 200μ, 2m, 20m, 200m, 20A
Resolution	100nA max	100nA max
Capacitance		
Ranges	—	DM25XT: 2n, 20n, 200n, 2μ, 20μ, 200μ, 2000μF DM27XT: 2n, 20n, 2μ, 20μ, 2000μF
Inductance		
Ranges	—	DM27XT: 2m, 20m, 200m, 2H, 20H
Temperature		
Ranges/Resolution	—	DM23XT: 200°C/0.1°C; 750°C/1°C 200°F/0.1°F; 1400°F/1°F
Logic Test		
Frequency Response	DM15XL: TTL 20MHz	TTL/CMOS 20MHz
Continuity Test	Beeper <75Ω (except DM2)	Beeper <75Ω
Diode Test	Yes	Yes
Transistor h_{FE}	—	NPN, PNP

Pen-Style DM73

DM73. The DM73 is one of the smallest digital multi-meters in the world and has a full 3 1/2 digit LCD display. The autoranging capabilities and Data Hold button make this DMM perfect for those tight spaces. With its continuity beeper, 13 measurement ranges, and 0.5% basic VDC accuracy, the DM73 works great as a convenient, simple to use digital multimeter. Two LR-44 batteries included. **\$9.95**

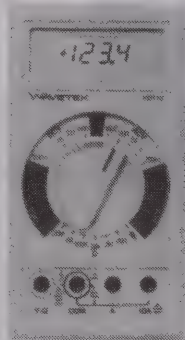


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ELECTRONICS EXPERTS ON ALL YOUR SPECIAL
EQUIPMENT OR COMPONENT NEEDS.

The Instrumentation Products Division of Beckman Industrial is now a part of Wavetek Corporation

HEAVY DUTY SERIES 100 MULTIMETERS

- Waterproof
- Drop-proof
- Fully Fused to 600V
- Shockproof
- High Visibility Yellow
- Meets MIL-T-2880, Style A, Class 2



HD100. The HD100 is a heavy duty meter which measures current up to 2 amps. It has an accuracy of 0.25% on the DC voltage ranges and overload protection on all ranges. **185.00**

HD110. The HD110 measures 10 amps AC or DC. The 10 amp range withstands up to 20 amps for 30 seconds, and provides accuracy of 0.25% on the DC voltage ranges. It comes equipped with an audible continuity beeper. **219.00**

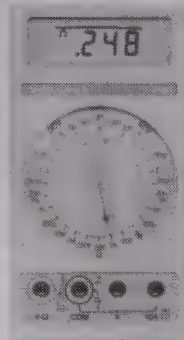
HD110T. In addition to the features of the HD110, the HD110T provides direct temperature readings. This meter uses any Type K thermocouple with a standard miniature or subminiature connector. Temp. range: -20°C to +1260°C (-4°F to +1999°F). **239.00**

HD130B. The HD130B features True RMS (AC coupled) capability for making accurate measurements of complex waveforms. **279.00**

HD140B. The HD140B features a 4 1/2 digit display for higher resolution and greater accuracy, 0.05% DC volts. It also provides True RMS on AC voltage ranges. **309.00**

PROFESSIONAL SERIES 300 MULTIMETERS

- 2000 Hour Battery Life
- 22M Ω Input Impedance
- Continuity Check
- Diode Test Function
- 1500V Overload & 6kV Transient Protection
- Safety Designed Leads



310B

300A. The 300A measures up to 2 amps AC or DC and provides 0.5% DC volts accuracy with a 3 1/2 digit LCD. **135.00**

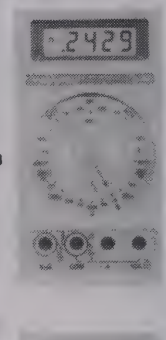
310B. The 310B measures up to 10 amps AC or DC signals and provides 0.25% basic accuracy. The 2 amp range is protected with a 2 amp/600 volt fuse. The 10 amp range can withstand up to 20 amps for 30 seconds or less (unfused). The unit is also equipped with an audible continuity beeper which emits a 100 millisecond tone when continuity is established between the units two test leads. **175.00**

320B. The 320B provides the professional with the same features as the 310B but with an improved basic DC accuracy of 0.1%. **199.00**

330B. Provides all the 320B features plus True RMS (AC coupled) measurements on both AC voltage and current ranges. **249.00**

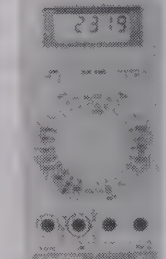
TRUE RMS MULTIMETERS

- 4 1/2 Digit Display
- True RMS
- $\pm 0.05\%$ DCV Accuracy
- 10 Amp Current Range
- Continuity Check
- Diode Test Function



4410B

4410B. 4 1/2 digit hand-held multimeter. High reliability. True RMS. Basic DCV accuracy of 0.05%. Single rotary switch. Built-in 10 amp AC/DC capability. Continuity function. RF shielding for accurate readings around high RF energy fields. No special adapters needed to measure up to 10 amps AC or DC. **279.00**



850

- 4 1/2 Digit Display
- True RMS
- $\pm 0.05\%$ DCV Accuracy
- Frequency Counter to 200kHz
- Data Hold

850. 200kHz frequency counter with 4 1/2 digit LCD. 0.05% DC accuracy. True RMS. For field service, audio component repair, modem tone testing, and high accuracy uses. Data hold and continuity beeper. **209.00**

MODEL HD110T Temperature Specifications

Range	-20°C to 1260°C
Resolution	1°C to 1°F
Thermocouple	Type K $\pm 2^\circ\text{C}$ ($\pm 4^\circ\text{F}$) (Model TP-255 included)

General Specifications

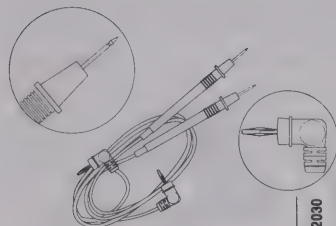
Display	All: 3 1/2 digit LCD except HD140B, 4410B, 850: 4 1/2 digit LCD
Operating Temperature	All: 0°C to 50°C except 850: 0°C to 35°C
Battery Type	All: NEDA 1604 9V
Battery Life	All: 2000 hrs, except 850: 100 hrs
Dimensions	Series 100: 7" x 3.9" x 2.0"; Series 300, 4410B: 6.85" x 3.65" x 1.8" 850: 6.5" x 3.55" x 1.4"
Weight	Series 100: 19 oz.; Series 300, 4410B: 16 oz.; 850: 13.5 oz. (all weights include battery)

Function Specifications (25°C $\pm 5^\circ\text{C}$)

		HD100, 300A	HD110, HD110T, 310B	HD130B, 320B, 330B	HD140B, 4410B	850
DC Voltage	Ranges	200m, 2, 20, 200 1500V	200m, 2, 20, 200 1500V	200m, 2, 20, 200 1500V	200m, 2, 20, 200 1500V	200m, 2, 20, 200, 1000V
	Resolution	100 μV	100 μV	100 μV	10 μV	10 μV
	Basic Accuracy	0.25% rdg. ± 1 digit except 300A: 0.5% rdg. ± 1 digit	0.25% rdg. ± 1 digit	0.1% rdg. ± 1 digit	0.05% rdg. ± 2 digits	0.05% rdg. ± 3 digits
AC Voltage	Input Impedance	22M Ω	22M Ω	22M Ω	10M Ω	10M Ω
	Ranges	200m, 2, 20, 200, 1000V	200m, 2, 20, 200, 1000V	200m, 2, 20, 200, 1000V	200m, 2, 20, 200, 1000V	200m, 2, 20, 200, 750
	Resolution	100 μV	100 μV	100 μV	10 μV	10 μV
Resistance	Basic Accuracy	0.75% rdg. ± 3 digits except 300A: 1.5% rdg. ± 4 digits	0.75% rdg. ± 3 digits	0.6% rdg. ± 3 digits	1.5% rdg. ± 20 digits	0.75% rdg. ± 10 digits
	Bandwidth	10kHz	10kHz	10kHz except HD130B, 330B: 40kHz	10kHz	1kHz
	Input Impedance	22M Ω	22M Ω	22M Ω	10M Ω	10M Ω
DC Current	Ranges	200 μA , 2m, 20m, 200m, 2A	200 μA , 2m, 20m, 200m, 2, 10A	200 μA , 2m, 20m, 200m, 2, 10A	200 μA , 2m, 20m, 200m, 2, 10A	200 μA , 2m, 20m, 200m, 2, 10A
	Resolution	100nA	100nA	100nA	10nA	10nA
	Basic Accuracy	0.75% rdg. ± 1 digit except 300A: 1.0% rdg. ± 1 digit	0.75% rdg. ± 1 digit	0.35% rdg. ± 1 digit	0.2% rdg. ± 2 digits	0.3% rdg. ± 3 digits
AC Current	Ranges	200 μA , 2m, 20m, 200m, 2A	200 μA , 2m, 20m, 200m, 2, 10A	200 μA , 2m, 20m, 200m, 2, 10A	200 μA , 2m, 20m, 200m, 2, 10A	200 μA , 2m, 20m, 200m, 2, 10A
	Resolution	100nA	100nA	100nA	10nA	10nA
	Basic Accuracy	1.5% rdg. ± 3 digits except 300A: 2.0% rdg. ± 4 digits	1.5% rdg. ± 3 digits	0.9% rdg. ± 3 digits	0.7% rdg. ± 20 digits	0.75% rdg. ± 10 digits
Diode Test	Bandwidth	2kHz	2kHz	2kHz except HD130B, 330B: 5kHz	1kHz	500Hz
	Ranges	2V	2V	2V	2V	2V
	Resolution	—	—	1mV	—	—
Accuracy	Resolution	—	—	—	—	—
	Accuracy	0.25% rdg. ± 2 digits except 300A: 0.5% rdg. ± 2 digits	0.25% rdg. ± 2 digits	0.1% rdg. ± 2 digits	0.1% rdg. ± 2 digits	1.5% ± 0

**CAN'T FIND THE EXACT PART YOU NEED?
CALL US FOR ASSISTANCE.**

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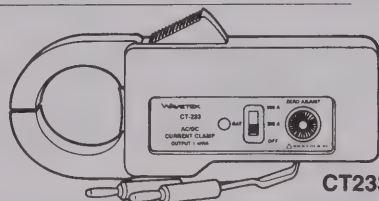


TL25

		HD160	2010-2020-2030	RMS225	Series 300	850	4410B+HD140B	HD100+110+110T+130B	DM5XL	DM10XL	DM15XL	HD153	DM210/15B/20L	DM23XT	DM25XT+DM27XT	DM73	DM23/25XL/27XL	PRICE
CARRYING CASES																		
VC10	Padded Vinyl																●	\$3.25
VC12	Vinyl												●					4.25
VC20	Padded Vinyl								(H)	(H)	(H)							9.95
VC30	Padded Vinyl								(C)	(C)	(C)							12.95
VC201	Padded Vinyl			●	●	●	●											11.00
VC211	Padded Vinyl	(H)		(H)								(H)					●	11.00
VC221	Padded Vinyl		(C)															14.00
VC231	Padded Vinyl	(C)	(H)	(C)								(C)		(C)	(C)			14.00
LC13	Leather																●	14.95
DC205	Deluxe				●	●	●	●										30.00
DC207	Deluxe, with space for clamp				●	●	●	●										36.00
DC215	Deluxe	(H)		(H)								(H)						30.00
DC217	Deluxe, with space for clamp	(H)		(H)								(H)						36.00
PROBES																		
HV231-10	40kVDC, 10MΩ High Voltage	●	●	●		●	●	●		●	●			●	●		●	95.00
HV231-22	40kVDC, 22MΩ High Voltage					●		●										95.00
RF241	200MHz, 25VRMS RF Probe	●	●	●	●	●	●	●				●		●	●		●	49.00
CURRENT CLAMPS																		
CT231	150 Amp AC	(G)	●	(G)	●	●	●	●			●	●		●	●		●	72.00
CT232	1000 Amp AC	(G)	●	(G)	●	●	●	●			●	●		●	●		●	189.00
CT233	600 Amp DC/AC	(G)	●	(G)	●	●	●	●	●	●	●	●	●	●	●		●	179.00
CT234A	400 Amp AC	(G)	●	(G)	●	●	●	●			●	●		●	●		●	95.00
CT236	10-500 Amp AC	(G)	●	(G)	●	●	●	●		●	●	●		●	●		●	105.00
TEST LEADS																		
TL20	Standard (Shrouded Tips)								(C)	(C)	(C)			●	●			7.50
TL25	Standard												(C)				●	4.50
TL27	Standard (B)																	4.50
TL30	Standard (Screw-on Alligator Clips)								●	●	●			(C)	(C)			11.00
TL73	Standard (Ground Lead)																(C)	3.50
AL73A	Alligator Clip (Ground Lead)																●	7.50
TL244	Replacement	(C)	●	●	●	●	●	●				●						12.00
AL244	Screw-on Alligator Clips for TL244 (E)																	3.60
TL245	Standard (A)		(C)	(C)	(C)	(C)	(C)	(C)				(C)						10.00
TL246B	Large Alligator Clips (A)	●	●	●	●	●	●	●	●	●	●	●	●	●	●			13.50
TL247	Surface Mount Tweezer Probes	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	19.00
TL251	Extra Large Alligator Clips (A)	●	●	●	●	●	●	●	●	●	●	●	●	●	●			23.75
DL243B	Basic Kit	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	30.00
DL248B	Deluxe Kit	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	48.00
DL249	Deluxe Surface Mount Kit	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	72.00
REPLACEMENT PARTS AND MISCELLANEOUS ACCESSORIES																		
TC253	Temperature Converter	●	●	●	●	●	●	●	(F)	●	●	●	●		(F)	●		70.00
H10/H10Y	Protective Holster (Black or Yellow)									●	●	●						9.95
H30/H30Y	Protective Holster (Black or Yellow)														●	●		11.95
H220/H220Y	Protective Holster (Black or Yellow)	●		●								●						14.00
H221/H221Y	Protective Holster (Gray or Yellow)	●	●															14.00
TL901	Silicone Lead Wires (E)	●	●	●	●	●	●	●		●	●	●		●	●		●	14.00
TL902	Standard Test Probe Tips (E), Requires TL901, DL243B, DL248B or DL249																	9.00
TL903	Spring Hook Clips (E), Requires TL901, DL243B, DL248B or DL249																	14.00
TL904	Needle Probe Tip Extender (E), Requires TL25, TL245, TL902, DL243B, DL248B or DL249																	9.00
TL905	Alligator Clips (E), Requires TL901, DL243B, DL248B or DL249																	7.00
TL906	Spade Lugs, Pkg of four (4), Requires TL901, DL243B, DL248B or DL249																	5.00

NOTES:

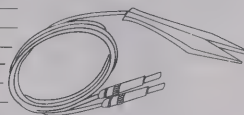
- Compatible with 180° input connector style of Models 3000, 3010, 3020, 3020B, 3030, Tech 300, Tech 310, Tech 320B, shipped after Aug. 1, 1983
- Replacement test leads for DM15, DM20, DM25, and DM77.
- Originally shipped with DMM.
- Includes one (1) red and (1) black.
- TC253 not required for 360B or HD110T. Temperature capability is built into these models.
- Not compatible with some software features. Consult factory for specific application.
- Fits meter without holster.



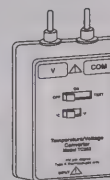
CT233



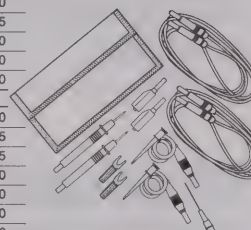
DL249



TL247



TC253



DL248B

NEED VALUE-ADDED SERVICES?
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WRIST DEVICES

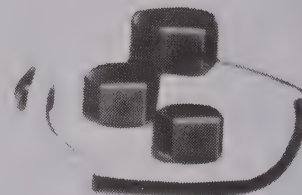
ADJUSTABLE WRIST BANDS & STRAPS

Adjustable static wrist band has an insulative exterior that dissipates static from personnel before static can damage devices being handled. UL Listed with cord.

PART NUMBER	DESCRIPTION
2204SP	ADJUST FABRIC WRIST BAND ONLY
2214SP	ADJUST FABRIC WRIST STRAP W / 5 FT COILED CORD
2224SP	ADJUST FABRIC WRIST STRAP W / 10 FT COILED CORD
2244SP	ADJUST FABRIC WRIST W / LIGHTWEIGHT GND CORD

Grounding wrist strap provides cost effective and reliable static protection.

2209SP	DISPOSABLE WRIST STRAP
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SURFACES

TABLE & FLOOR RUNNERS & MATS

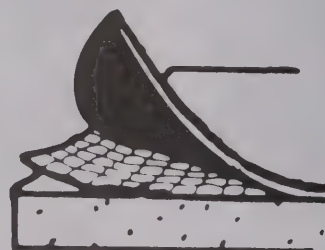
Unique three-layer construction is durable, static-dissipative vinyl with sufficiently low resistivity to discharge static-laden conductors, but prevents shorting of pins on back of printed circuit boards laid on it. Also available in other colors.

8203	GRY 4 x 6 FT FLOOR MAT W / 15 FT GRD CORD & ACCESSORIES
8213	GRY 2 x 4 FT TABLE MAT W / 15 FT GRD SYSTEM & ACCESSORIES
8253	GRY 4 x 24 FT FLOOR RUN W / 15 FT GRD CORD & ACCESSORIES
8263	GRY 4 x 6 FT TABLE RUN W / 15 FT GRD CORD & ACCESSORIES

VELOSTAT WORK STATION GROUNDING KIT

Complete kit provides the basic items needed to create a static-safe work environment. Includes: Table Mat (2' x 4'), Floor Mat (4' x 6'), Cord (15'), Grounding System and Adjustable Wrist Strap.

8011	BLK VELOSTAT TABLE & FLOOR MATS & ACCESSORIES
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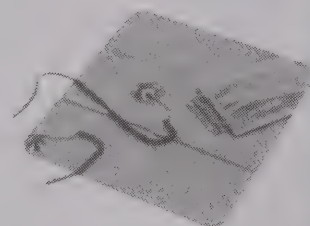


FIELD SERVICE

PORTABLE FIELD SERVICE GROUNDING KITS

Portable grounding kits provide all the basic items to create a static-safe work environment for field service work. All kits contain a 2204 Wrist Band, ground cords, and a static-dissipative work surface.

920209-R	2 x 2 FT KIT FOLDS COMPACT, W / STORAGE POCKETS
8505	LIGHTWEIGHT FIELD SERVICE KIT

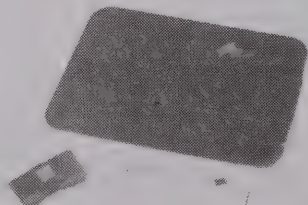


CONDUCTIVE FOAM

CONDUCTIVE FOAM

Foam is nonconductive and is ideal for long-term storage. Black in color and specifically created as a pin insertion grade foam.

2802 (1/4")	POLYETHYLENE, 1/4 x 39 x 39", 2 LB / CU FT DENSITY
2802 (3/8")	POLYETHYLENE, 3/8 x 39 x 39", 2 LB / CU FT DENSITY
2803 (1/4")	POLYETHYLENE, 1/4 x 39 x 39", 3 LB / CU FT DENSITY
2803 (3/8")	POLYETHYLENE, 3/8 x 39 x 39", 3 LB / CU FT DENSITY
2806 (1/4")	POLYETHYLENE, 1/4 x 39 x 39", 6 LB / CU FT DENSITY
2806 (3/8")	POLYETHYLENE, 3/8 x 39 x 39", 6 LB / CU FT DENSITY

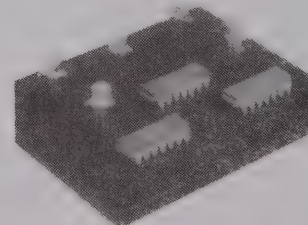


CLEANER

STATIC CONTROL SURFACE CLEANER

An extra strength cleaner for removing dirt from all types of static control surfaces from benchtops to floormats or field service kits. Used full strength, it is a clear, water based liquid which leaves no tacky residue. It is safe for use in clean rooms.

8001	STATIC CONTROL SURFACE CLEANER, 1 QT
------	--------------------------------------



MOUNTING TAPES

A-20 ACRYLIC FOAM TAPE

Urethane foam tape is soft, conformable, and high in internal strength. Ideal for general purpose mounting. Excellent in low or high temperature applications.

PART NUMBER	DESCRIPTION
4008	URETHANE FOAM TAPE, 1/8 x 1 x 36 YD ROLL
4016	URETHANE FOAM TAPE, 1/16 x 1 x 36 YD ROLL

ELECTRICAL TAPES

SCOTCH BRAND SUPER 33+ TAPE

Premium-grade, 7 mil, flame retardant and weather resistant. Resists temperature and moisture for splicing. Meets UL 510 and CSA. Do not use on neoprene jacketed cable.

33+ SUPER (3/4" x 66')	BLK VINYL TAPE, 3/4" x 66' ROLL IN CAN
------------------------	--

SCOTCH BRAND 35 COLOR TAPE

Premium-grade, 7 mil, flame retardant and weather resistant. Available in red, yel, blu, brn, gry, wht, grn, orn, and vio colors. Meets UL 510, HHI-595, and CSA 22.2.

35 (COLOR) (3/4" x 66')	COLOR VINYL TAPE, 3/4" x 66' ROLL IN CAN
-------------------------	--

SCOTCH BRAND SUPER 88 TAPE

Premium-grade heavy-duty, 8.5 mil, flame retardant, cold and weather resistant with superior handling features. Meets UL 510, MIL-1024391 and CSA 22.2.

88 SUPER (3/4" x 66')	BLK VINYL TAPE, 3/4" x 66' ROLL IN CAN
-----------------------	--

TEMFLEX TAPE

Economy-grade, 7 mil tape that is UL Listed and CSA certified for 176 deg F and 80 deg C.

1700P TAPE (3/4" x 66')	TEMFLEX VINYL TAPE, 3/4" x 66' ROLL
-------------------------	-------------------------------------

GLASS CLOTH TAPE

High-temperature thermosetting, 7 mil pressure sensitive tape. Provides heat-stable insulation up to 130 deg C. UL Recognized and Listed in CSA Bulletin 827B.

27 (3/4" x 66')	GLASS CLOTH TAPE, 3/4" x 66' ROLL
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INSULATING TAPES

HIGH TEMPERATURE POLYIMIDE FILM TAPE

Used in applications that undergo extreme temperature variations. Solvent resistant and high dielectric strength (7000 V). Meets UL 510 for flame retardancy.

92 TAPE (1/2")	POLYIMIDE FILM W/ SILICONE ADH, 1/2" x 36 YDS
92 TAPE (3/4")	POLYIMIDE FILM W/ SILICONE ADH, 3/4" x 36 YDS

SHIELDING AND GROUNDING TAPES

ENGINEERING KIT FOR FOIL SHIELDING TAPES

This kit is a unique way to have a variety of foil shielding tapes at hand for design or prototype needs. The kit contains eight rolls: 1170, 1181, 1182, 1183, 1194, 1245, and 1345; each is 3/4" X 4 yds. Dispenser box shows basic technical information for each product type.

FOIL TAPE KIT	ENGINEERING KIT FOR FOIL SHIELDING TAPE
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SCOTCH BRAND COPPER FOIL SHIELDING TAPE

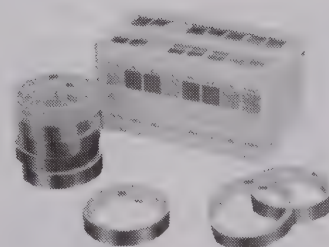
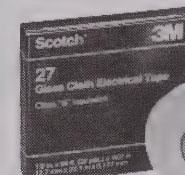
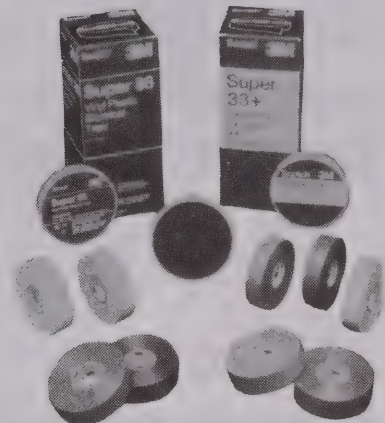
Copper foil electrical tape provides an easy to apply and cost-effective way to shield against EMI/RFI radiation. Foil tape is conductive thru the adhesive. Meets UL 510 for flame retardancy.

1181 (1")	DEAD SOFT COPPER FOIL TAPE, 1" x 18 YDS
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SCOTCH BRAND EMBOSSED COPPER FOIL SHIELDING TAPE

The embossed pattern provides a reliable conductive thru adhesive system.

1245 (1")	EMBOSSED PLAIN COPPER TAPE, 1" x 18 YDS
1345 (1")	EMBOSSED TINNED COPPER TAPE, 1" x 18 YDS

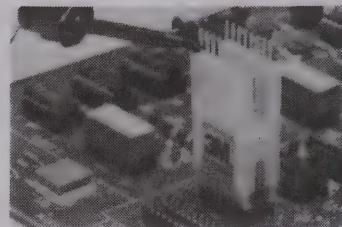


TEST CLIPS

DIP "THRU-HOLE" NAIL HEAD TYPE

Nail head test clips allow for hands-free testing. Nail contact keeps probes and test leads from sliding off. The test clips have helical compression springs to make positive contact during testing.

PART NUMBER	DESCRIPTION
923695-R	8 PIN STD NAIL-HEAD TEST CLIP, ALLOY-DIP .3" WIDE
923698-R	14 PIN STD NAIL-HEAD TEST CLIP, ALLOY-DIP .3" WIDE
923700-R	16 PIN STD NAIL-HEAD TEST CLIP, ALLOY-DIP .3" WIDE
923704-R	20 PIN STD NAIL-HEAD TEST CLIP, ALLOY-DIP .3" WIDE
923714-R	24 PIN STD NAIL-HEAD TEST CLIP, ALLOY-DIP .5 - 6" WIDE
923715-R	24 PIN STD NAIL-HEAD TEST CLIP, ALLOY-DIP .3" WIDE
923718-R	28 PIN STD NAIL-HEAD TEST CLIP, ALLOY-DIP .5 - 6" WIDE
923722-R	40 PIN STD NAIL-HEAD TEST CLIP, ALLOY-DIP .5 - 6" WIDE
923726-R	64 PIN STD NAIL-HEAD TEST CLIP, ALLOY-DIP .5 - 6" WIDE



DIP LONG WIRE CABLE ASSY COMPATIBLE TYPE

To be used in conjunction with standard connector and cable assemblies. The test clips have helical compression springs to make positive contact during testing.

923690-08-R	8 PIN LONG WIRE TEST CLIP, ALLOY-DIP .3" WIDE
923690-14-R	14 PIN LONG WIRE TEST CLIP, ALLOY-DIP .3" WIDE
923690-16-R	16 PIN LONG WIRE TEST CLIP, ALLOY-DIP .3" WIDE
923690-20-R	20 PIN LONG WIRE TEST CLIP, ALLOY-DIP .3" WIDE
923690-24-R	24 PIN LONG WIRE TEST CLIP, ALLOY-DIP .5 - 6" WIDE
923689-24-I	24 PIN LONG WIRE TEST CLIP, ALLOY-DIP .3" WIDE
923690-28-R	28 PIN LONG WIRE TEST CLIP, ALLOY-DIP .5 - 6" WIDE
923690-40-R	40 PIN LONG WIRE TEST CLIP, ALLOY-DIP .5 - 6" WIDE
923690-64-R	64 PIN LONG WIRE TEST CLIP, ALLOY-DIP .5 - 6" WIDE



NAIL HEAD



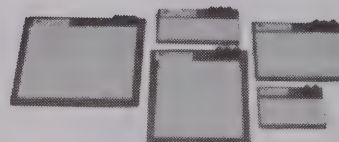
LONG WIRE

BREADBOARDS

A C E SOLDERLESS BREADBOARDS

ACE system for design, test, and modification of circuits. Available in DIP capacities ranging from 6 x "16 pin" DIPs to 36 x "14 pin" DIPs.

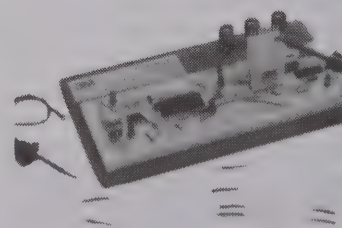
923335-R	ACE 106, 610 TIE POINTS, 6 x 16 PIN DIP COMPATIBILITY
923336-R	ACE 109, 840 TIE POINTS, 9 x 14 PIN DIP COMPATIBILITY
923337-R	ACE 118, 1824 TIE POINTS, 18 x 14 PIN DIP COMPATIBILITY
923338-R	ACE 127, 2712 TIE POINTS, 27 x 14 PIN DIP COMPATIBILITY
923339-R	ACE 136, 3648 TIE POINTS, 36 x 14 PIN DIP COMPATIBILITY



WIRE JUMPERS FOR BREADBOARDS

Wires cut to 14 different lengths from .1 inch to 5 inches. 22 awg solid wire, stripped with leads bent 90 degrees for easy insertion.

923351-R	JUMPER WIRE KIT - ASSORTMENT OF 350 PCS IN PLASTIC BOX
923345-01-R	JUMPER WIRES, 0.1" LONG, BARE, 200 / PKG
923345-02-R	JUMPER WIRES, 0.2" LONG, RED, 200 / PKG
923345-03-R	JUMPER WIRES, 0.3" LONG, ORN, 200 / PKG
923345-04-R	JUMPER WIRES, 0.4" LONG, YEL, 200 / PKG
923345-05-R	JUMPER WIRES, 0.5" LONG, GRN, 200 / PKG
923345-06-R	JUMPER WIRES, 0.6" LONG, BLU, 150 / PKG
923345-07-R	JUMPER WIRES, 0.7" LONG, VIO, 150 / PKG
923345-08-R	JUMPER WIRES, 0.8" LONG, GRY, 150 / PKG
923345-09-R	JUMPER WIRES, 0.9" LONG, WHT, 150 / PKG
923345-10-R	JUMPER WIRES, 1.0" LONG, BRN, 100 / PKG
923345-20-R	JUMPER WIRES, 2.0" LONG, RED, 100 / PKG
923345-30-R	JUMPER WIRES, 3.0" LONG, ORN, 75 / PKG
923345-40-R	JUMPER WIRES, 4.0" LONG, YEL, 75 / PKG
923345-50-R	JUMPER WIRES, 5.0" LONG, GRN, 75 / PKG





VS22475R BASIC PLUS OBSERVATION SYSTEMS

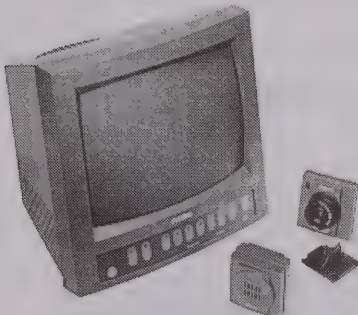


- Complete system, ready to install, includes monitor, extremely small CCD camera, 33' coaxial cable and all mounting hardware
- New system monitor with negligible blanking time, connections for up to 4 cameras and potential for two-way audio
- New, advanced CCD camera with integrated, fixed focus 4 mm, f/2.0 lens
- Camera provides instant picture with no warm-up time and no burn-in effects
- Camera provides excellent picture quality, adjusting automatically to all light conditions, even twilight

System consists of an advanced CCD camera with a detachable lens, monochrome monitor, camera mounting bracket, 33 feet of coaxial cable and all necessary fittings. One cable links the camera to the monitor and carries the audio/video signals as well as the camera supply. The CCD camera offers excellent picture quality over a wide viewing range even in the lowest light conditions. The monitor handles up to four cameras with less than one second blanking time when switching cameras. Switching can be done manually or automatically, according to a programmable sequence, with time intervals from four to forty seconds. One or more cameras may be deactivated while maintaining the sequence. System is also backwards compatible.

Philips Model VS22475R—Price Each★

VS32405R ENHANCED OBSERVATION SYSTEM



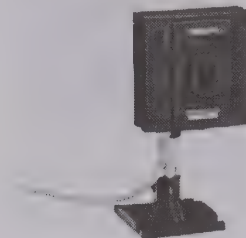
- Complete system, ready to install, includes monitor, extremely small CCD camera, 33' coaxial cable and all mounting hardware
- New system monitor with audio alarm functions, switching and connections for up to 6 cameras, negligible blanking time and two-way audio
- New, advanced CCD camera with exchangeable 8 mm, f/1.3 lens with adjustable focus
- Camera provides instant picture with no warm-up time and no burn-in effects
- Camera provides excellent picture quality, adjusting automatically to all light conditions, even twilight

The VS32405R system has been designed for those users whose needs for observation, surveillance, and monitoring require additional features. The system consists of an advanced CCD camera with a detachable lens, monochrome monitor, speakerbox, camera mounting bracket, 33 feet of coaxial cable and all necessary fittings. One cable links the camera to the monitor and carries the audio/video signals as well as the camera supply. The CCD camera offers excellent picture quality over a wide viewing range, even in the lowest light conditions. The monitor handles up to six cameras with less than one second blanking time when switching cameras. Switching can be done manually or automatically, according to a programmable sequence, with time intervals from four to forty seconds. One or more cameras may be deactivated while maintaining the sequence. System is also backwards compatible.

Philips Model VS32405R—Price Each★

ACCESSORIES

CAMERAS

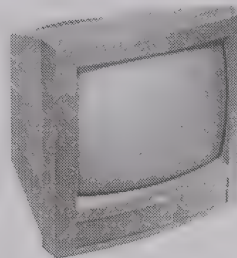


VC81205R

To extend the Basic Plus system, the fixed lens CCD camera (VC81205R) or the loose lens CCD camera (VC81615R) can be added.

Philips Model VC81605R—Price Each★
Philips Model VC81615R—Price Each★

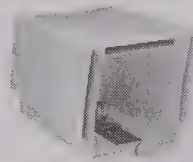
SLAVE MONITOR (VS44405R)



One or more slave monitors are simply connected to the system monitor, allowing for simultaneous video and audio monitoring at other positions, for example, in another room.

Philips Model VS44405R—
Price Each★

PROTECTIVE CAMERA HOUSING (VC11510T)



This optional housing protects camera from rain, dust and other elements during outdoor use. It is easily installed on the same bracket as supplied with the CCD camera and it serves as an additional deterrent, since the camera will attract more attention.

Philips Model VC11510T—
Price Each★

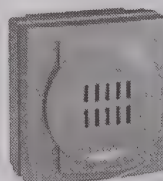
LIEN AMPLIFIER (VS29005T)



This is designed for applications where the monitor is more than 600 feet away from the camera. The kit includes a line amplifier for distances up to 1800 feet, as well as cable plugs and a power supply adapter.

Philips Model VS29005T—
Price Each★

SPEAKER BOX (VS39005R)



This accessory serves as a speaker at the camera end of the Observation System, thus allowing two-way audio communication. It is mounted near the CCD camera. The maximum cable length for a configuration with camera and speaker box is 300 feet.

Philips Model VS39005R—Price Each★

★PRICING AVAILABLE ON REQUEST



PHILIPS

TV/VCR Combinations

CCR095AT 9" TV/VCR COMBINATIONS



- 9" Color TV w/built-in VCR tuner
- 181 channel cable-ready FS
- Auto tuner set-up
- AC/DC operation
- Car battery cord
- Detachable sunscreen
- 8 event/1 year programming
- One-touch record
- Automatic daylight savings time adjust
- Menu on-screen display (English & Spanish)
- Audio/video inputs
- Digital tracking system
- Repeat play
- Auto play
- Variable sleep timer
- Alternate channel
- Earphone jack
- UHF/VHF antenna
- 35 button TV/VCR remote control
- Closed captioning
- 3-speed play/record
- X15 forward/reverse latching search (SLP)
- Still/pause
- On-screen time display
- On-screen tape counter w/memory
- Auto power on
- Auto rewind/eject/power off
- Channel search
- Quick mechanism
- 90° in-line picture tube
- Picture reset
- Color, tint, brightness, picture & sharpness controls
- Remote random access tuning
- Detachable AC line cord

UPC Code: 3784976730

Product Dimensions: 11.4" W x 12.3" H x 13" D

Carton Dimensions: 15.4" W x 14.6" H x 15.4" D

Product Weight: 19.2 lbs.

Remote Number: 483521837121

Philips Model CCR095AT—Price Each★

CCR190AT 19" TV/VCR COMBINATION



- 19" Color TV with built-in VCR
- 181 channel cable-ready FS tuner
- Auto tuner set-up
- Closed captioning
- 8 event/1 year programming
- One-touch record
- Automatic daylight savings time adjust
- Menu on-screen display (English & Spanish)
- Audio/video inputs
- Digital tracking system
- Repeat play
- Auto play
- Variable sleep timer
- Color, tint, brightness, picture and sharpness controls
- 35 button TV/VCR remote control
- Alternate channel
- 3-speed play/record
- X15 forward/reverse latching search (SLP)
- Still/pause
- On-screen time display
- On-screen tape counter w/memory
- Auto power on
- Auto rewind/eject/power off
- Channel search
- Quick mechanism
- 90° in-line picture tube
- Picture reset
- Remote random access tuning
- Volume mute

UPC Code: 3784976774

Product Dimensions: 19" W x 18.8" H x 18.1" D

Carton Dimensions: 22.4" W x 22.6" H x 21.4" D

Product Weight: 40.5 lbs.

Remote Number: 483521837121

Master Pack: 1

Philips Model CCR190AT—Price Each★

CCR202AT 20" TV/VCR COMBINATION



- 20" Color TV with built-in VCR
- 181 channel cable-ready FS tuner
- Auto tuner set-up
- Closed captioning
- 4 event/1 year programming
- 1-minute timer back-up system
- One-touch record with standby
- Menu on-screen display
- Audio/video inputs
- Digital tracking system
- Repeat play
- Auto play
- Quick mechanism
- Picture reset
- Remote random access tuning
- Volume mute
- Programmable scan tuning
- Variable sleep timer
- 37 button TV/VCR remote control
- 3-speed play/record
- X27 forward/reverse latching search (SLP)
- Still/pause/slow motion
- On-screen time display
- On-screen real time counter w/memory
- Auto power on
- Auto rewind/eject/power off
- Channel search
- Time search
- TV monitor function
- 90° in-line picture tube
- Color, tint, brightness, picture and sharpness controls

UPC Code: 3784976762

Product Dimensions: 21.1" W x 21.3" H x 19.1" D

Carton Dimensions: 24.1" W x 24.8" H x 22" D

Product Weight: 48.6 lbs.

Remote Number: 483521837098

Master Pack: 1

Philips Model CCR202AT—Price Each★

CCR132AT 13" TV/VCR COMBINATION



- 13" Color TV with built-in VCR
- 181 channel cable-ready FS tuner
- Auto tuner set-up
- Closed captioning
- 8 event/1 year programming
- One-touch record
- Automatic daylight savings time adjust
- Menu on-screen display (English & Spanish)
- Audio/video inputs
- Digital tracking system
- Repeat play
- Auto play
- Variable sleep timer
- Alternate channel
- UHF/VHF antenna
- 3-speed play/record
- X15 forward/reverse latching search (SLP)
- Still/pause
- On-screen time display
- On-screen tape counter w/memory
- Auto power on
- Auto rewind/eject/power off
- Channel search
- Quick mechanism
- 90° in-line picture tube
- Picture reset
- Color, tint, brightness, picture & sharpness controls
- Remote random access tuning
- Earphone jack
- 35 button TV/VCR remote control

UPC Code: 3784976731

Product Dimensions: 14.7" W x 15.3" H x 14.6" D

Carton Dimensions: 17.4" W x 18.3" H x 16.7" D

Product Weight: 24.3 lbs.

Remote Number: 483521837121

Philips Model CCR132AT—Price Each★

★ PRICING AVAILABLE ON REQUEST



Note: Steel and brass hardware is nickel-plated unless otherwise noted. Specify suffix C for pkg. of 100 (i.e., F-579-C).

ROUND HEAD MACHINE SCREWS (FIG. A)

STEEL TYPE		
Waldom No.	Size Thd. x Lgth. (Inches)	Price Per 100
F-579	2-56 x 1/4	\$3.52
F-461	2-56 x 1/4	3.39
F-462	2-56 x 1/2	3.54
F-463	2-56 x 3/4	4.16
F-464	3-48 x 3/4	4.31
F-465	4-36 x 1/4	3.42
F-466	4-36 x 3/4	3.71
F-467	4-36 x 1/2	3.71
F-580	4-36 x 5/8	*
F-468	4-36 x 3/4	7.11
F-469	4-40 x 1/4	3.39
F-581	4-40 x 3/4	3.54
F-470	4-40 x 1/2	2.89
F-582	4-40 x 5/8	3.89
F-471	4-40 x 3/4	3.39
F-472	6-32 x 1/4	3.06
F-583	6-32 x 3/4	3.21
F-473	6-32 x 1/2	2.79
F-584	6-32 x 5/8	6.81
F-475	6-32 x 1	3.21
F-476	6-32 x 1 1/4	4.04
F-477	6-32 x 2	4.31
F-478	8-32 x 1/4	3.36
F-479	8-32 x 3/4	3.67
F-480	8-32 x 1/2	3.21
F-481	8-32 x 3/4	3.52
F-482	8-32 x 1	4.43
F-483	8-32 x 1 1/4	4.11
F-484	10-32 x 1/2	4.06
F-485	10-32 x 3/4	5.34
F-486	10-32 x 1	4.64
F-487	10-32 x 1 1/2	5.88

BINDER HEAD STEEL MACHINE SCREWS (FIG. B)

F-591	2-56 x 1/4	\$3.52
F-592	2-56 x 1/4	3.39
F-593	2-56 x 1/2	3.54
F-594	2-56 x 3/4	4.96
F-020	4-40 x 1/4	2.82
F-021	4-40 x 1/2	3.09
F-022	4-40 x 3/4	3.39
F-502	6-32 x 3/4	2.51
F-503	6-32 x 1/4	2.54
F-504	6-32 x 3/4	2.67
F-014	6-32 x 1/2	2.79
F-621	6-32 x 5/8	3.85
F-015	6-32 x 3/4	3.39
F-023	8-32 x 1/4	2.79
F-505	8-32 x 3/4	3.51
F-024	8-32 x 3/4	3.06
F-025	8-32 x 1/2	3.21
F-026	8-32 x 3/4	3.52
F-577	10-32 x 1/2	4.06
F-578	10-32 x 3/4	5.34

FLAT HEAD STEEL MACHINE SCREWS (FIG. C)

F-622	4-40 x 1/4	\$3.65
F-623	4-40 x 3/4	4.96
F-624	4-40 x 1/2	3.71
F-625	6-32 x 1/4	3.36
F-627	6-32 x 1/2	3.66
F-628	6-32 x 3/4	3.67
F-629	8-32 x 3/4	3.71
F-630	8-32 x 1/2	3.86
F-631	8-32 x 3/4	4.23
F-632	10-32 x 1/2	4.88

ROUND HEAD STEEL WOOD SCREWS (FIG. D)

Waldom No.	Size Thd. x Lgth. (Inches)	Price Per 100
F-514	4 x 1/2	\$3.39
F-515	4 x 3/4	3.54
F-516	6 x 3/4	3.91
F-517	6 x 1	4.09
F-518	8 x 3/4	4.09
F-047	8 x 1	4.64
F-519	8 x 1 1/4	4.88

FLAT HEAD STEEL WOOD SCREWS (FIG. E)

Waldom No.	Size Thd. x Lgth. (Inches)	Price Per 100
F-027	8 x 1/2	\$3.91
F-048	8 x 1	4.64
F-032	8 x 1 1/4	4.88

HEX SLOTTED WASHER HEAD SHEET METAL SCREWS (FIG. F)

Waldom No.	Size Thd. x Lgth. (Inches)	Price Per 100
F-056	6 x 1/4	\$3.82
F-057	6 x 3/4	4.01
F-050	6 x 1/2	4.21
F-058	6 x 5/8	3.98
F-054	6 x 3/4	4.11
F-051	8 x 1/4	4.21
F-052	8 x 3/4	4.41
F-053	8 x 1/2	4.63
F-055	8 x 5/8	4.84
F-059	8 x 3/4	5.08

SLOTTED HEX HEAD SHEET METAL SCREWS TYPE A (FIG. G)

Waldom No.	Size Thd. x Lgth. (Inches)	Price Per 100
F-016	4 x 3/4	\$3.84
F-523	4 x 1/2	4.03
F-524	6 x 1/4	3.66
F-525	6 x 3/4	3.84
F-526	6 x 1/2	5.39
F-527	6 x 3/4	5.92
F-528	8 x 1/4	4.03
F-529	8 x 3/4	4.69
F-530	8 x 1/2	5.29
F-017	8 x 1	5.78
F-531	8 x 1	5.18
F-532	10 x 3/4	4.03
F-533	10 x 1/2	5.33
F-534	10 x 3/4	4.86

PAN HEAD SHEET METAL SCREWS TYPE A (FIG. H)

Waldom No.	Size Thd. x Lgth. (Inches)	Price Per 100
F-596	4 x 1/2	\$3.16
F-033	6 x 1/4	3.31
F-597	6 x 3/4	3.46
F-034	6 x 1/2	3.62
F-035	6 x 3/4	3.98
F-036	8 x 1/4	3.62
F-037	8 x 1/2	3.98
F-038	8 x 1	4.58

ROUND HEAD NYLON SCREWS (FIG. I)

Waldom No.	Size Thd. x Lgth. (Inches)	Price Per 100
FN-800	2-56 x 1/4	\$8.35
FN-801	2-56 x 1/2	8.38
FN-802	4-40 x 1/4	8.43
FN-803	4-40 x 1/2	8.48
FN-804	4-40 x 3/4	8.53
FN-805	6-32 x 1/4	8.43

SNAP BUTTON HOLE PLUGS

Waldom No.	Hole Size (In.)	Price Per 100
HP-1	1/4	\$ 9.34
HP-2	3/8	21.38
HP-3	1/2	11.51
HP-4	3/4	17.90
HP-5	1	32.00

BINDER HEAD NYLON SCREWS (FIG. J)

Waldom No.	Size Thd. x Lgth. (Inches)	Price Per 100
FN-815	2-56 x 1/4	\$8.35
FN-816	2-56 x 1/2	8.38
FN-817	4-40 x 1/4	8.43
FN-818	4-40 x 1/2	8.48
FN-819	4-40 x 3/4	8.53
FN-820	6-32 x 1/4	8.43
FN-821	6-32 x 3/4	8.48
FN-822	6-32 x 1/2	8.53
FN-823	6-32 x 5/8	8.57
FN-824	6-32 x 3/4	8.62
FN-825	8-32 x 3/4	8.48
FN-826	8-32 x 1/4	8.53
FN-827	8-32 x 3/4	8.62
FN-828	10-32 x 1/2	8.53
FN-829	10-32 x 1	8.67

HEX STEEL NUTS (FIG. K)

Waldom No.	Size Thd. x Lgth. (Inches)	Price Per 100
F-554	2-56 x 3/16 x 1/16	\$2.43
F-555	3-48 x 3/16 x 1/16	2.54
F-556	4-36 x 1/4 x 3/32	3.21
F-557	4-40 x 1/4 x 3/32	2.67
F-559	6-32 x 1/4 x 3/32	2.67
F-560	6-32 x 3/16 x 7/64	2.79
F-561	8-32 x 1/4 x 3/32	2.67
F-562	8-32 x 5/16 x 7/64	2.79
F-563	10-32 x 3/8 x 1/8	2.93
F-564	1/4-20 x 7/16 x 3/16	3.76

WASHERS

Steel and brass washers are nickel-plated unless otherwise noted. Fiber washers, both flat and extruded, are for insulation of components and controls from chassis or from each other.

FLAT STEEL WASHERS (FIG. L)

Waldom No.	Screw No.	O.D., In.	Price Per 100
MW-400	#2	7/32	\$1.82
MW-401	#4	9/32	2.55
MW-402	#6	3/4	3.45
MW-403	#8	3/4	1.89
MW-404	#10	7/16	2.00
MW-408	1/4	5/8	2.84
MW-410	3/8	1 1/16	3.61

FLAT FIBER WASHERS

Waldom No.	Screw No.	O.D., In.	Price Per 100
FW-374	#4	1/4	\$1.55
FW-375	#6	1/4	1.77
FW-376	#8	3/4	2.00
FW-377	#10	3/4	1.88
FW-387*	#10	3/4	3.84

NYLON FLAT WASHERS

Waldom No.	Screw No.	O.D., In.	Price Per 100
NW-874	#2	1/4	\$2.00
NW-875	#4	1/4	2.05
NW-876	#6	5/16	2.67
NW-877	#8	3/4	3.04
NW-878	#10	3/4	3.21

STEEL CUP WASHERS (FIG. M)

Waldom No.	Screw No.	O.D., In.	Price Per 100
CW-6	#6	.....	\$2.53
CW-8	#8	.....	2.19

STEEL SPLIT LOCK WASHERS (FIG. N)

Waldom No.	Screw No.	O.D., In.	Price Per 100
MW-411†	#4	.....	\$1.69
MW-412†	#6	.....	1.92
MW-413†	#8	.....	2.00
MW-414†	#10	.....	2.10
MW-415†	1/4	.....	2.19

*Extruded fiber washer. †Zinc plated.

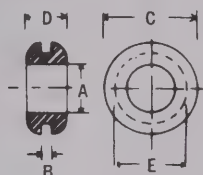
METAL CABLE CLAMPS



Mounting hole 1/4". Material (Mtl.) abbreviations: B, brass, hot tin-dipped; S, steel, cadmium plated.

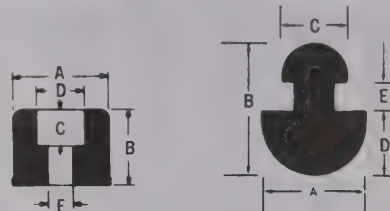
Part No.	Mtl., In.	Ht., In.	W., In.	Wire Hold Area	Pkg. of 100
C-201	020B	1/16"	1/4"	3/32"	\$ 8.30
C-202	032S	5/16"	3/8"	10/64"	8.80
C-203	032S	11/16"	3/8"	1/4"	11.98
C-204	032S	15/16"	3/8"	10/32"	14.45

VINYL GROMMETS



Part No.	A In.	B In.	C In.	D In.	E In.	Pkg. of 100
G-401	1/8	1/16	11/32	3/16	1/4	\$ 3.84
G-402	3/16	1/16	1/16	7/32	5/16	4.31
G-403	1/4	1/16	9/16	1/4	3/8	4.53
G-404	5/16	1/16	5/8	1/4	7/16	4.76
G-405	3/8	1/16	5/8	1/4	1/2	4.99
G-406	1/2	1/16	13/16	9/32	5/8	8.85
G-407	5/8	1/16	11/8	9/32	7/8	15.87

RUBBER BUMPERS



For mounting on all types of electronic equipment. Prevents vibration and protects surfaces under equipment from being marred. Button type installs in pierced hole.

RECESSED SCREW TYPE

Part No.	A In.	B In.	C In.	D In.	E In.	Pkg. of 100
B-321	1/2	1/4	5/32	1/4	1/8	\$ 7.06
B-322	3/4	1/4	1/8	1/4	1/8	27.19
B-323	5/8	3/8	7/32	1/4	1/8	13.03
B-324	3/4	3/8	7/32	1/4	1/8	21.64

BUTTON TYPE

B-361	3/8	3/8	17/64	3/16	.04	\$10.46
B-363	5/8	5/16	15/32	5/16	.04	24.72

STANDARD KNOBS

11/16" Diameter 13/32" High

Waldom No.	Description	Pkg. of 5
WA-1400	1/4" Molded Hole	\$2.54
WA-1400W	1/4" Brass Insert	7.72
WA-1400R	1/8" Molded Hole	3.46

ROUND KNOBS

WA-1450	1/4" Molded Hole	\$2.54
WA-1450W	1/4" Brass Insert	5.85
WA-1450G	1/8" Molded Hole	3.46

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- INTERFAN
- MOLEX
- MOLEX-ETC
- PHILIPS COMPONENTS
- POWER-ONE*
- SPEEDY-TYS
- WALDOM HARDWARE

* New from Waldom

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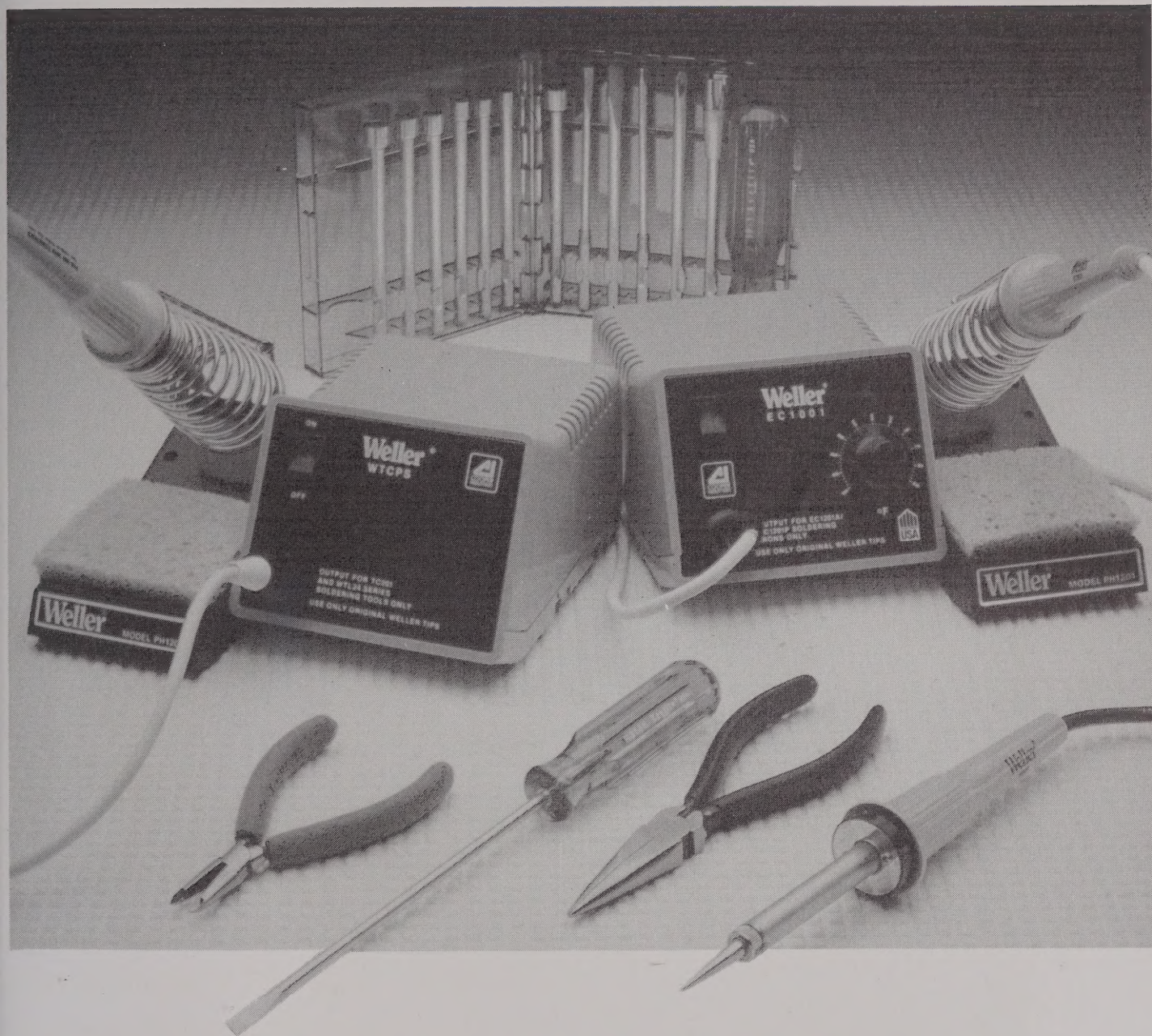
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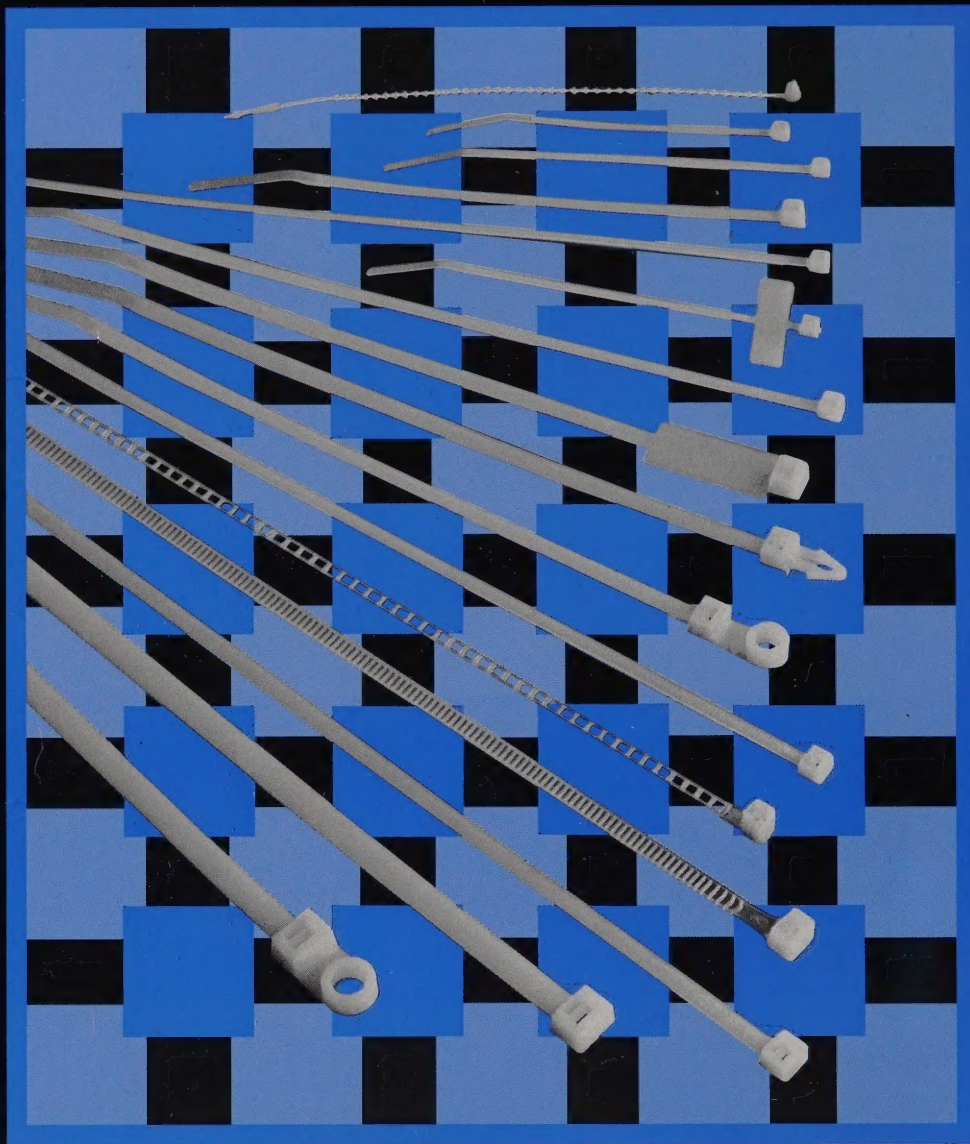
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